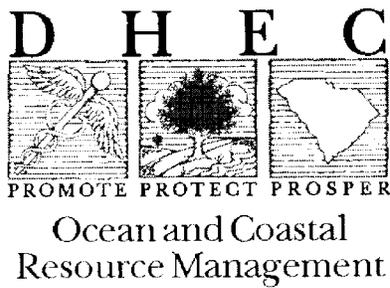
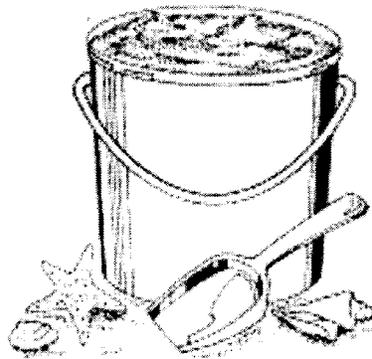


# South Carolina's Annual State of the Beaches Report

March 2005



## **Introduction**

The following report summarizes changes to South Carolina's beaches during the past year. The results are based on beach profile surveys conducted during 2004 at approximately 400 monitoring stations throughout the state. Surveys start at a benchmark located landward of the primary dune or seawall, and at most stations continue down the beach face to a depth of -25 ft or an offshore distance of 3,000 ft, whichever is reached first. Across the dune, data is collected on foot using a Global Positioning System (GPS) receiver. On the upper beach and intertidal beach at low tide, data is collected using a GPS receiver mounted on an ATV 4-wheeler. For the offshore portion of the profile, data is collected from a boat with a GPS receiver and fathometer. These three data sets can then be integrated into one seamless beach profile, which shows a cross-section of the beach shape at the time of the survey. The 2004 data can then be compared to similar data from 2002 (available state-wide) or 2003 (available for the Grand Strand) to determine what changes have occurred to the beach profile during the past year(s).

The reference elevation used for data collection and for all elevations discussed in this report is the North American Vertical Datum of 1988 (NAVD88), which is approximately the same as mean sea level. Profiles are analyzed for dune erosion or scarping, changes in beach slope, and changes in unit-width sand volume, the amount of sand from the dune down to a chosen cutoff elevation per linear ft of shoreline. This sand volume is expressed as cubic yards per linear ft of beach. The presence or absence of a berm, the shelf of dry sand between the dune and the high-water mark, is noted, as well as any sand bars and corresponding troughs. Berm width is particularly important, since it represents the amount of recreational dry-sand beach seaward of the dune that is available at high tide.

Most beaches in South Carolina go through a yearly cycle of profile change. In the summer, smaller waves tend to push sand up the beach, forming a wider berm and a steeper beach slope below mean high water. In the winter, higher energy waves erode sand from the berm and move it to an offshore bar, resulting in a narrower high-tide

beach and a more gently sloping beach below mean high water. In many cases this seasonal profile variation is greater in magnitude than the long-term trend for a particular island or beach—that is, the change observed from October to April and then from April back to October can be greater than the change observed for consecutive Aprils or Octobers.

As called for under the Beachfront Management Act, all beaches in the state have been classified as standard zones or inlet zones. Inlet zones are regions in close proximity to a tidal inlet, where the presence of the inlet plays a dominant role in erosion or accretion patterns on the beach. Most inlet zones are unstabilized, meaning the inlet channel is not anchored by jetties or groins, and the surrounding shoreline is often quite dynamic. On the location maps that appear in this report, standard zones are designated as “S”, unstabilized inlet zones as “Iu”, and stabilized inlet zones as “Is”. In general, the larger Sea Islands in Charleston and Beaufort counties consist of a standard zone in the central portion of the island and an inlet zone at either end. The smaller Sea Islands are entirely inlet zones. In the Grand Strand, the shoreline is a continuous standard zone, interrupted by small inlet zones at the swashes.

The remainder of this report contains individual summaries for each island or beach in the state surveyed during the past year. The area from Capers Island to North Island is essentially undeveloped and is not surveyed. Summaries are presented in a south-to-north progression. The geographic setting of each beach is discussed, along with any significant long-term trends. A location map is also provided showing survey monument locations. Finally, a state-wide summary is found at the end of the report, along with an assessment of beach renourishment needs.

Plots for any individual monitoring station can be viewed on the internet at <http://camelot.coastal.edu/berm/plotbybm.php>, a web site developed and maintained by Dr. Scott Harris at Coastal Carolina University in Conway, SC.

## **State-Wide Summary**

The past year was one of the worst for South Carolina's beaches since Hurricane Hugo in 1989. Several tropical storms and hurricanes caused damage to the shore, and while no individual storm was catastrophic the cumulative impact was quite severe. During the first week of August Hurricane Alex formed off South Carolina and moved northeast, brushing the Outer Banks of North Carolina and bringing wind gusts, strong surf, high tides, and moderate localized beach erosion to South Carolina. A week later Charley passed just offshore as it moved northeast on its way to making landfall near Wilmington. The storm surge from Charley in the Myrtle Beach area was about 5 ft. At the end of August Gaston formed about 150 miles of Charleston and moved northwest, making landfall near McClellanville as a minimal hurricane.

During the first week of September Frances moved northwest over land through Florida and Georgia, bringing strong winds and an 8 ft swell to South Carolina. Toward the end of September Jeanne followed a similar inland track through Florida and Georgia, bringing erosion to the Beaufort County beaches. Unfortunately, the timing of these storms and the fact that most beach survey data collection was completed by August 2004 means the beach erosion brought about by the most recent hurricane season can not be quantified as part of this report.

There were no major beach renourishment projects constructed in 2004, partly due to a lack of state funding for renourishment in FY 2002-2003 and FY 2003-2004. Five million dollars was allocated for renourishment at Hunting Island State Park from the current state fiscal year budget, and construction is expected to start by the end of 2005. In addition, a large-scale renourishment project is expected to start construction at Folly Beach this spring, using a combination of federal and local government funds. A renourishment project is also expected to start construction during 2005 at Hilton Head Island using local government funds. Finally, a privately-funded renourishment project is expected to start construction at Debidue Beach this spring.

In general the inlet zones, those beaches closest to unstabilized tidal inlets, are the most dynamic beaches and may experience the greatest shoreline erosion or accretion. Other sections of beach away from tidal inlets can still experience chronic beach erosion. Regardless of its designation as an inlet zone or standard zone, any section of beach with a sand deficit and a minimal beach width should be considered at-risk, since the dunes and dry-sand beach provide a buffer between the ocean and high-ground development. For the year 2004, these at-risk beaches with sand deficits include the following areas:

*Beaufort County* - the southwestern and northeastern ends of Fripp Island (which is protected by a substantial rock revetment), all of Hunting Island (scheduled for renourishment later this year), and the northeastern end of Harbor Island.

*Colleton County* - the northeastern half of Edisto Beach, including the state park.

*Charleston County* - the central portion of Seabrook Island (which is protected by a substantial rock revetment), the northeastern end of Folly Beach (scheduled for renourishment later this year), and the northeastern end of Sullivans Island on Breach Inlet.

*Georgetown County* - the southern end of Debidue Beach (scheduled for renourishment later this year), and the southern end of Pawleys Island including the large public parking area.

*Horry County* – while the northern portion of Garden City Beach and the Cherry Grove section of North Myrtle Beach have lower sand volumes than surrounding areas, from a state-wide perspective they cannot be truly considered at risk.

The following represents a ranking of beach renourishment and beach restoration needs based upon DHEC-OCRM Regulation 30-18, which sets forth criteria for evaluating beach renourishment projects. Proposed projects are ranked based upon the environmental impact of the project, the public recreational benefits, the storm damage mitigation benefits to adjacent buildings and structures, the expected useful life of the project, and the extent of support for the project. Folly Beach and Hunting Island, which are highly eroded but already scheduled for renourishment during 2005, are not included in this list.

**First Priority: The Town of Edisto Beach and Edisto Beach State Park,  
Colleton County**

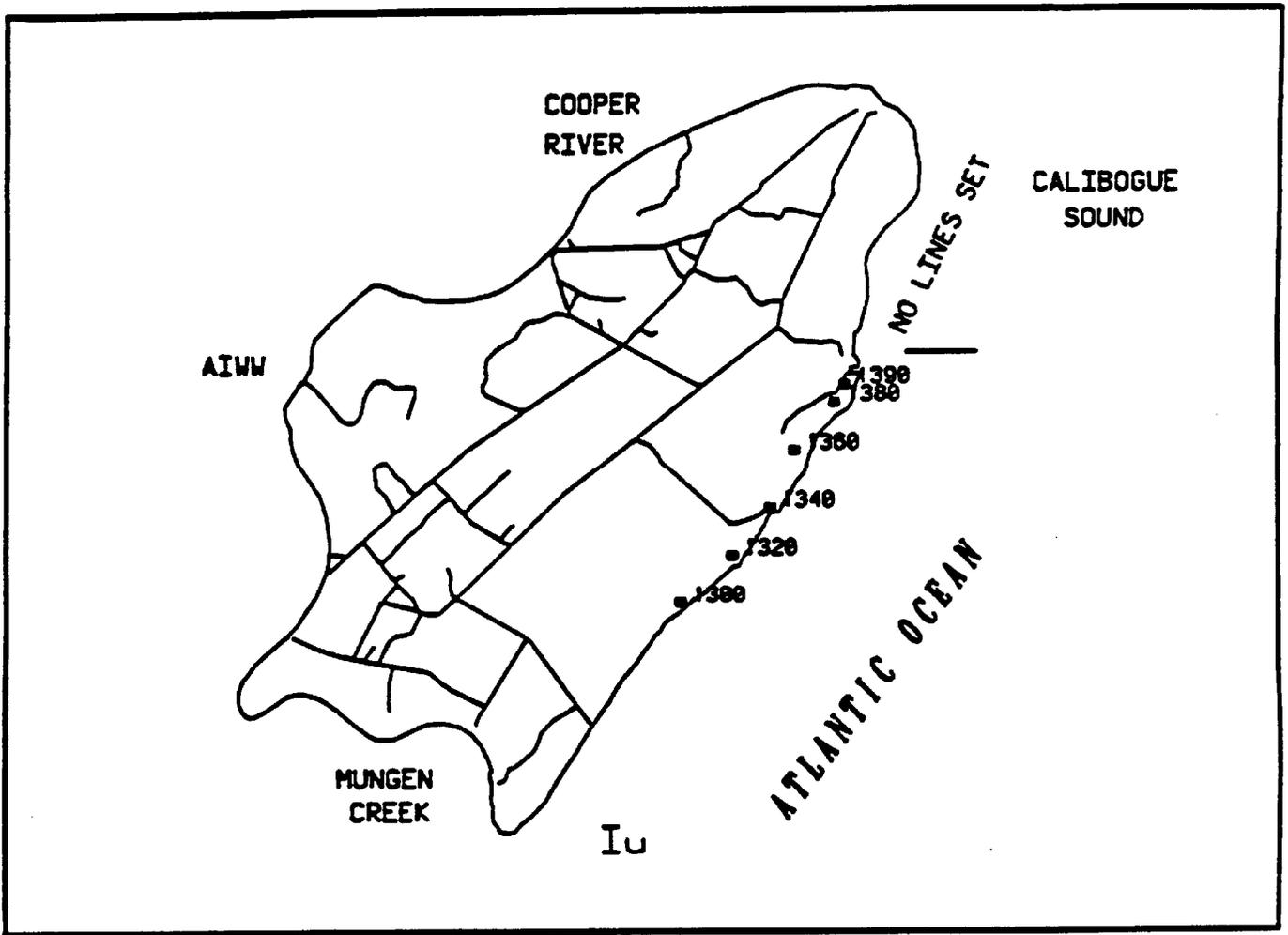
Edisto Beach State Park and the Town of Edisto Beach provide the only public beach access in Colleton County, and some of the best public beach access for residents of southern Charleston County. The beach within the Town limits was renourished with 150,000 cubic yards of sand in 1995, but most if not all of that sand has since been eroded away. The State Park was not included in this project, and as a result of chronic erosion over the years and the impact of several major storms the park beach is now in a critically eroded state. The northeastern portion of the beach within the Town limits is also sand-starved with many houses threatened. It is estimated that a renourishment project for both the State Park and the Town would cost \$8 million.

**Second Priority: Sullivans Island, Charleston County**

While most of Sullivans Island is stable to accretional, the section closest to Breach Inlet from Station 29 to Station 32 has a long-term erosion rate of -2 ft per year and has been chronically sand-starved for at least 10 years. This 3-block section of Sullivans Island, about 2,000 ft long, is one of the most critically eroded beaches in Charleston County. The beach is steep and narrow with little to no sand dune and no high-tide beach. Many oceanfront homeowners are using sand bags to keep the ocean water out from under their houses at high tide.

**Third Priority: Pawleys Island, Georgetown County**

The southern end of Pawleys Island is low-lying, with little or no sand dunes. A 1999 beach renourishment project using sand borrowed from the sand spit at the southern end of the island provided temporary relief but did not add any new sand to the littoral system. The dune that protects the public parking area has been chronically eroded for the past few years and has been rebuilt several times by emergency sand-scraping. This large public parking area, one of the few areas providing good public beach access in Georgetown County, is in jeopardy. The developed southern end of Pawleys Island also lacks a sand dune, and the ocean water comes up under several houses at high tide.



Daufuskie Island

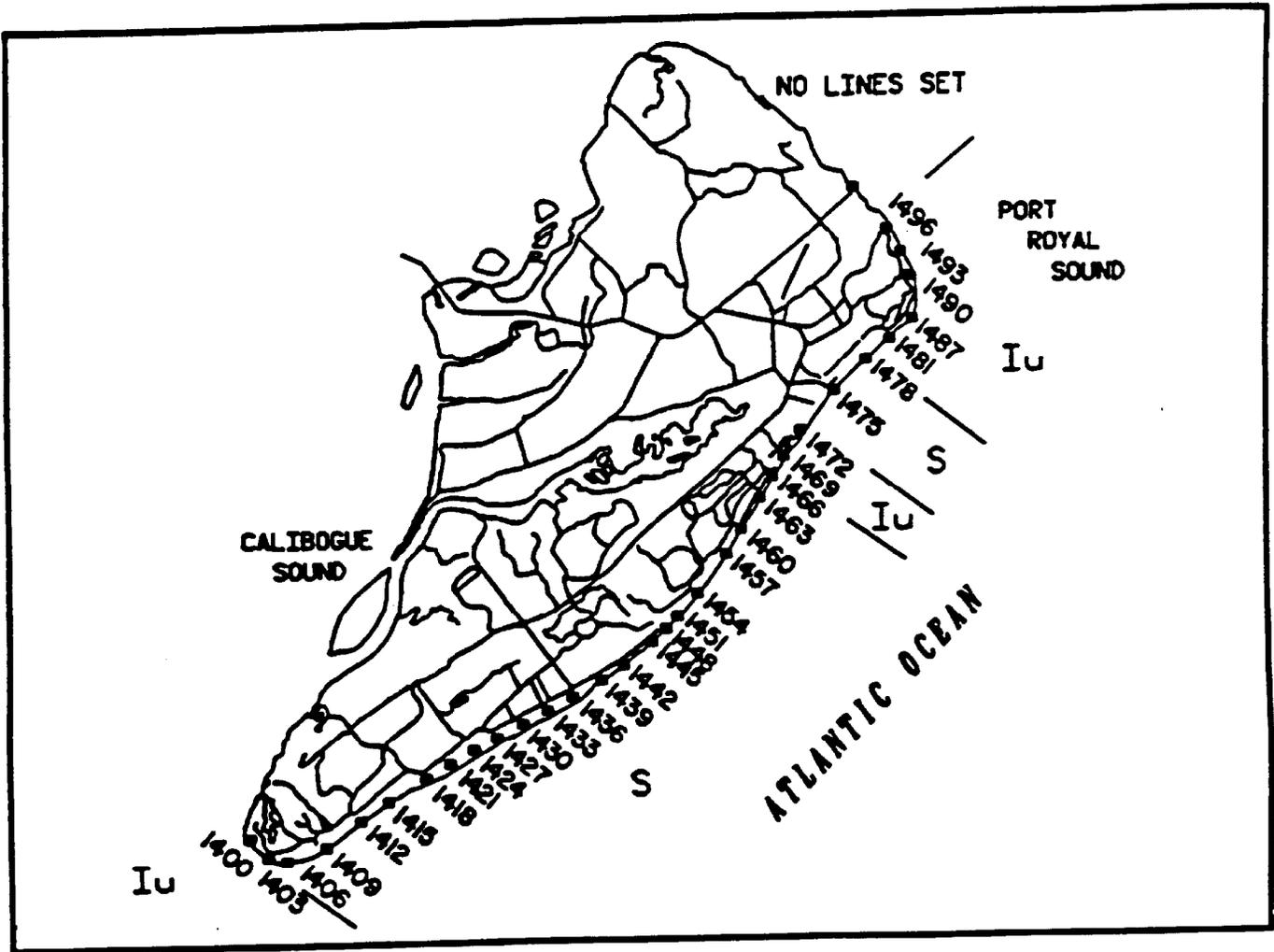
## ***Daufuskie Island***

Daufuskie Island is located to the south of Hilton Head Island, between Calibogue Sound to the northeast and Mungen Creek to the southwest. The entire island has been classified as an unstabilized inlet zone. A renourishment project was constructed here in December 1998, and has performed fairly well over the past 6 years.

There are 12 monitoring stations on Daufuskie Island. The earliest beach survey data was collected in 1988, but no survey data has been collected since 2002. As a result, this report will simply state the long-term trends for Daufuskie and also make some qualitative observations regarding the southern end of the island, called Bloody Point.

Long-term erosion rates on the island average -4 to -5 ft per year but go as high as -10 to -11 ft per year in places. Beginning at the northeast end of the island in the Melrose Tract and moving southwest, erosion rates begin at -1 ft per year but quickly increase to -7 ft per year near the clubhouse, then reach a maximum of -11 ft per year along the southern end of the Melrose Tract and in the northern end of the Oakridge Tract. There is a wooden bulkhead approximately 4,000 ft long in this area.

At the southwest end of the Oakridge Tract the long-term erosion rate decreases to about -6 ft per year, and continues to decrease to about -4.5 ft per year through much of the Bloody Point tract. At the southern end of the Bloody Point tract, at Bloody Point, the rate increases again to a maximum of approximately -8.5 ft per year. This area is very dynamic; it experienced extreme short-term erosion during much of 2001 and 2002, then became highly accretional in 2003.



Hilton Head Island

## ***Hilton Head Island***

Hilton Head Island, located between Calibogue Sound to the southwest and Port Royal Sound to the northeast, is one of the state's largest barrier islands. Hilton Head Island can be divided into five geomorphologic reaches, which are each discussed below. A beach renourishment project placed 2.5 million cubic yards of sand on the Hilton Head shoreline between May and November 1997, and another project of similar magnitude is expected to start construction in the next year. Beach survey data was collected in October 2002 and July 2004.

The portion of Sea Pines Plantation bordering on Calibogue Sound is an unstabilized inlet zone, subject to the influence of the Sound. The long-term shoreline change rate is 2 to 5 ft per year of accretion. This area experienced moderate erosion during the mid 1990's and was not renourished as part of the big 1997 project, but was renourished in the winter of 1999. SCCC monuments 1400-1409 are located here. As a result of the 1999 renourishment the beach width here was increased by as much as 250 ft, and even with some erosion over the past 4 years is still more than adequate. Using station 1409 as representative for this area, the profile was stable during the past year with slight accretion from the berm crest down to mean sea level.

The second zone on Hilton Head is a 10 mile-long standard zone that extends from station 1412 in Sea Pines Plantation to station 1469, just south of the Folly. This area includes South Forest Beach, North Forest Beach, and Palmetto Dunes. Both North Forest Beach and Palmetto Dunes were included in the 1997 renourishment project, which began at the Hilton Head Inn. Long-term shoreline change rates vary in this zone--they are accretional south of Coligny Circle and erosional north of Coligny Circle, with the rate of erosion increasing with distance from the Circle and reaching a maximum of -6 ft per year in Palmetto Dunes.

All stations in Sea Pines, from monument 1412 through 1424, were stable or showed slight upper-beach accretion. This area is generally the most stable to accretional section of Hilton Head Island, and has a well-established dune. Stations in South Forest

Beach, 1427 through 1436, also showed a trend of minor upper-beach accretion last year. This area is also stable in the long-term, with a well-established dune.

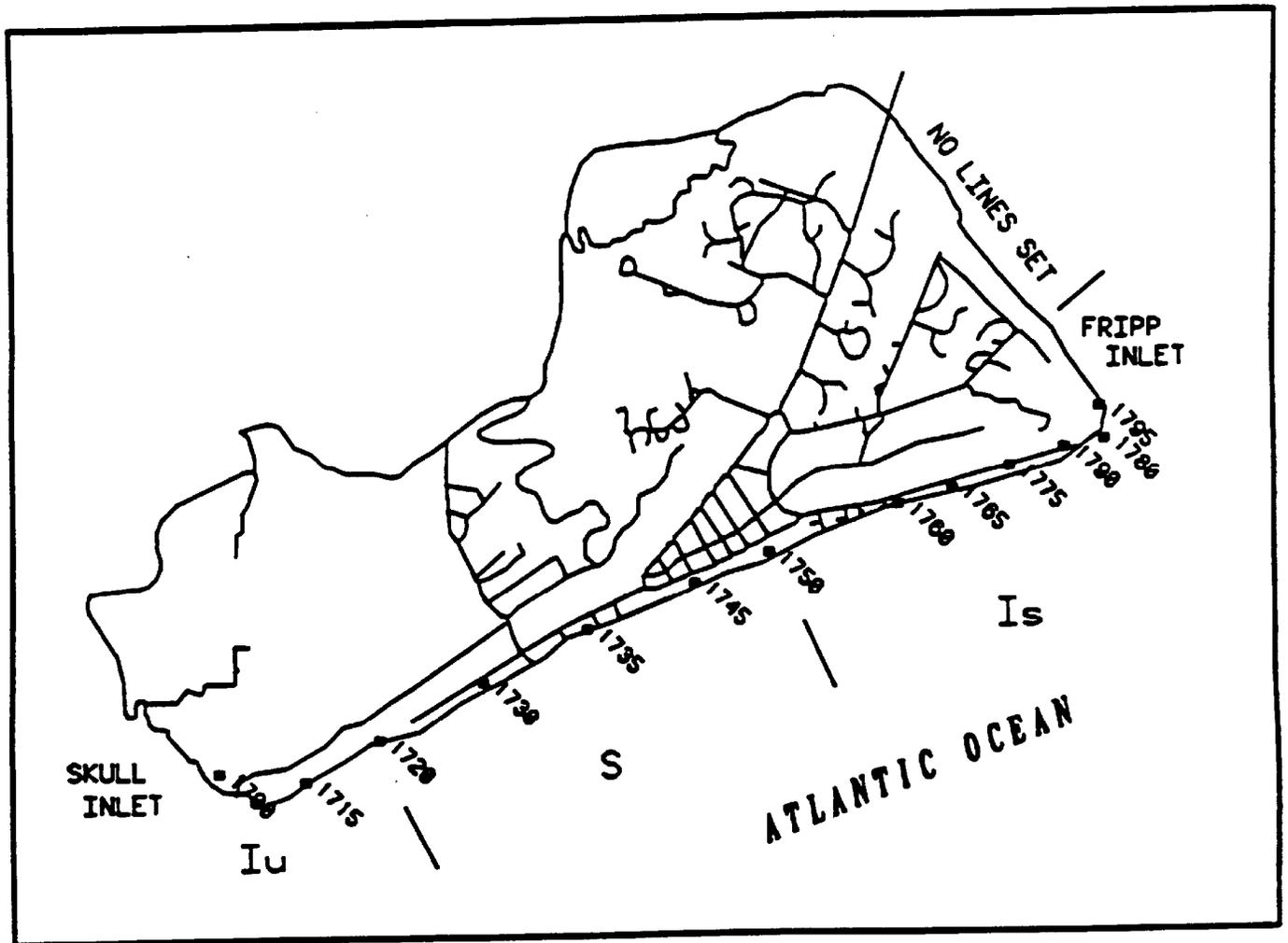
In North Forest Beach and Palmetto Dunes the long-term shoreline change rates become erosional. Beach profiles here showed sand deficits prior to renourishment, but unit-width volumes increased dramatically as a result of the 1997 beach fill project. Stations 1437 through 1448, located in North Forest Beach, showed substantial erosion of the renourishment berm between September 1998 and November 1999, but only minimal loss of renourishment sand since then. All stations in North Forest Beach were stable during the most recent survey period.

Stations 1451 through 1466 are located in Palmetto Dunes and showed the same general trend as North Forest Beach—all stations were stable to slightly accretional through July 2004. This pattern has persisted for the past 3 years and is at odds with the long-term trend for this area, where erosion rates range from -5 to -6 ft per year.

The third zone on Hilton Head is a 2200-ft long unstabilized inlet zone, located on either side of the Folly. Stations 1468, 1469 and 1472 are the monitoring stations in this reach, which historically was very dynamic because of the inlet channel. However, a small jetty constructed on the south side of the Folly in 1997 has helped stabilize this region. Long-term erosion rates here are around -2 ft per year. During the past year these stations showed minor accretion on the intertidal beach or on the upper-beach berm.

The fourth zone is a 1.3 mile-long standard zone that extends from just north of Burke's Beach Road to the Westin Hotel and includes stations 1474 through 1478. Long-term shoreline change rates here are stable. In the short-term, 1474 and 1475 showed about 75 ft of upper-beach accretion, while 1477 and 1478 were stable.

The fifth zone is an unstabilized inlet zone that includes all of the Port Royal Plantation shoreline. Survey stations 1481 through 1496 are located here. This region shows two distinct shoreline trends, with long-term accretion along the Atlantic shoreline to station 1484, and erosion of -3 to -4 ft per year along Port Royal Sound. This section of Hilton Head Island was not surveyed in 2004 but qualitative observations show continued accretion along the Atlantic shoreline at stations 1481 and 1484.



Fripp Island

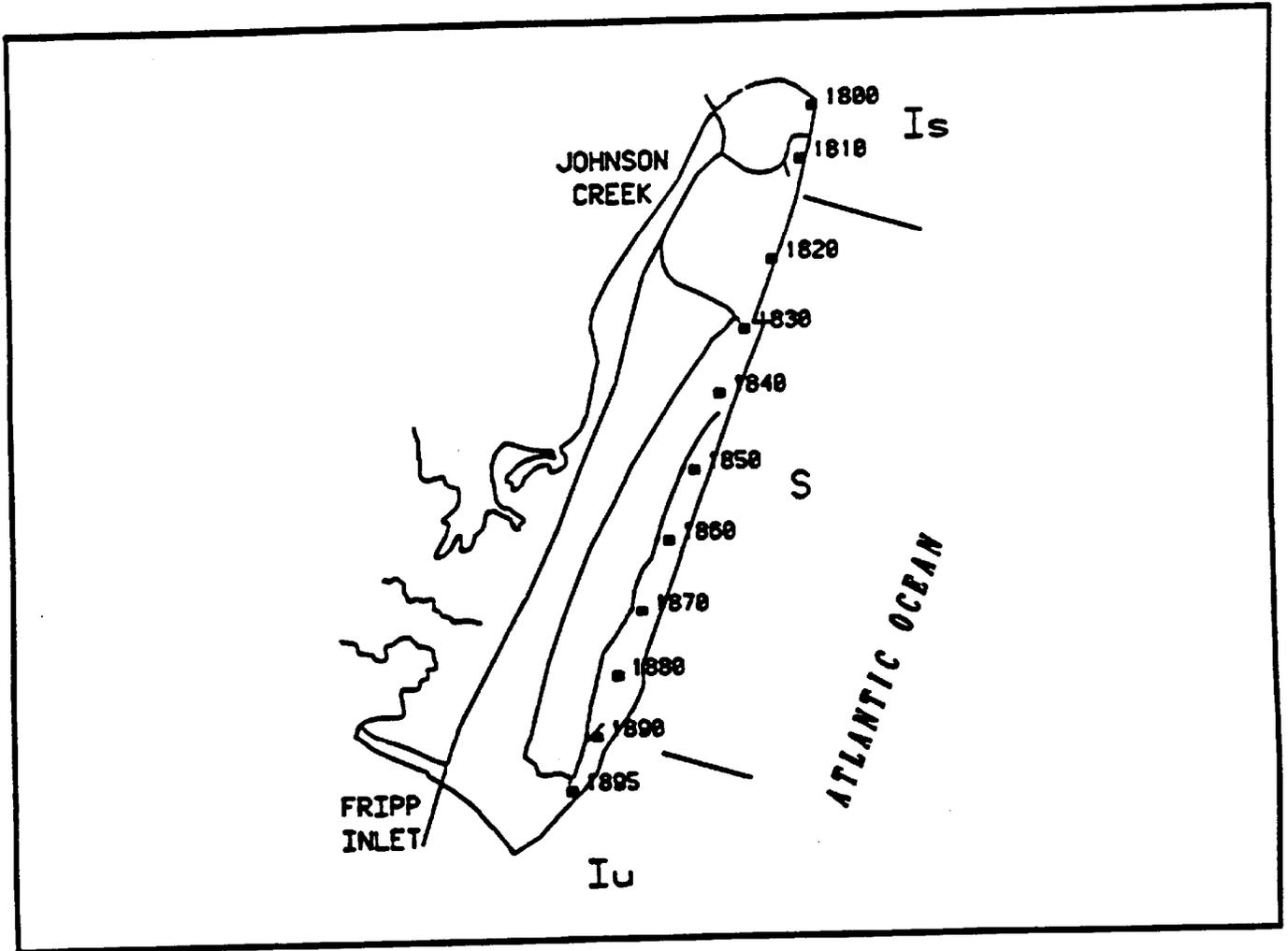
## ***Fripp Island***

Fripp Island is a three-mile long barrier island located between Pritchards Island and Skull Inlet to the southwest, and Hunting Island and Fripp Inlet to the northeast. Development on the island is primarily single family residential, and the island is almost continuously armored with revetments. The central portion of the island is classified as a standard zone, with an unstabilized inlet zone at the southwest end and a stabilized inlet zone at the northeast end. An analysis of long-term erosion trends has shown the island to be stable, although sand-bypassing events across Fripp Inlet, with a period of decades, can cause significant changes to the beach profiles on the island.

There are 15 beach survey monuments located on Fripp Island. Most recent profile data was collected at 5 of these stations in August 2002 and June 2004. Station 1700, on Skull Inlet, is sheltered from the open ocean and shows virtually no change from year to year. Stations 1715 through 1735 face the Atlantic Ocean along the southern half of Fripp Island. The beach width is narrower here, and at high tide there is little to no dry sand seaward of the substantial rock revetment. This beach is also fairly stable, and from 2002 to June 2004 the profile data shows only minor changes on the intertidal beach.

The beach condition changes at station 1745, on Winter Trout Rd. Northeast of here and up to station 1760 at house #763 on Marlin Drive, the beach has been strongly accretional in recent years. A large offshore sand shoal is attaching to the shoreline here, and as a result the beach has gained a tremendous amount of sand. This section of beach is hundreds of feet wider than along the southern half of the island. At station 1745 the dune field is over 300 ft wide and increased in width by another 50 ft during the current survey period. Station 1750 on Seahorse Drive shows a similar trend. The apex of the shoal attachment is located at station 1755 on Tautog Drive, where the increase in beach width reaches a maximum. The northeastern limit of the sand shoal attachment is located at station 1760, near house 763 Marlin Drive, where the beach width is still wide.

Stations 1765 to 1790, on the northeastern end of the island, are the last two monitoring stations that face the Atlantic Ocean. During the mid-1990's a massive sand bar attached onto the beach here, increasing the beach width by hundreds of feet, but during the late 1990's that sand was eroded away. At present the beach is very narrow and there is no dry-sand beach seaward of the revetment. The final two monitoring stations on Fripp Island are 1795 and 1798, located on Fripp Inlet. These stations show typical inlet profiles—very steep, no dry-sand beach, and only minor changes from year to year.



Hunting Island

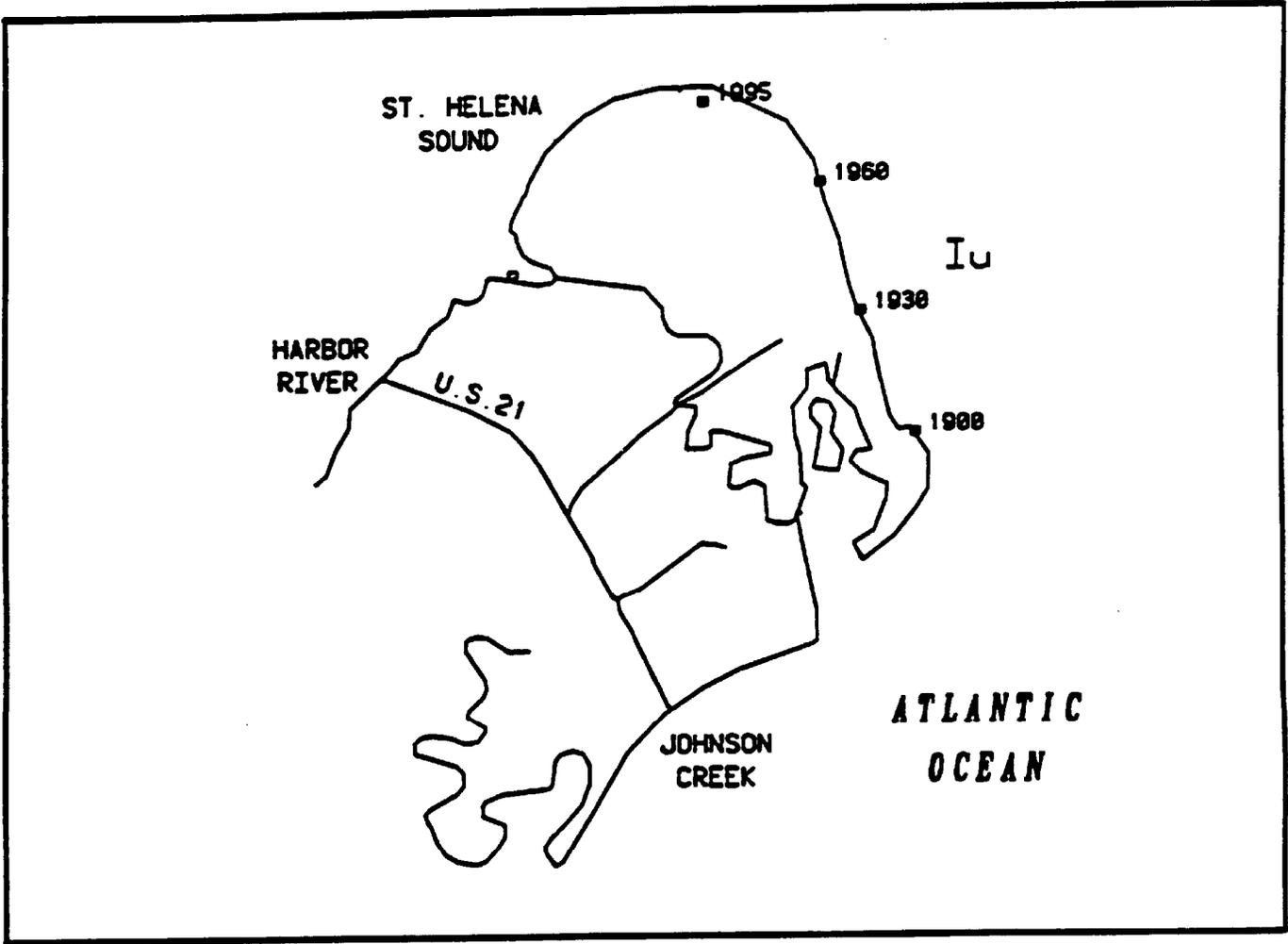
## ***Hunting Island***

Hunting Island is a state park located between Fripp Island and Harbor Island. The island has historically been very erosional, with long-term rates ranging from -7 up to -15 ft per year. Short-term erosion rates over the past few years have been even higher. The central portion of the island is a standard zone, while the southern end along Fripp Inlet is an unstabilized inlet zone and the northern end along St. Helena Sound is an inlet zone stabilized by an 800-ft terminal groin. Hunting Island has been renourished several times in the past 20 years, most recently in March 1991, but is presently in a critically eroded state.

The 11 beach monitoring stations on Hunting Island are unique in that their identification numbers increase from north to south. The most recent surveys, conducted during August 2002 and June 2004, show that the beach at Hunting Island continues to wash away. Almost all stations experienced erosion, typically ranging in magnitude from 10 to 50 ft. Erosion was slightly less at the northern end of the island, at station 1800, which benefits from the stabilizing effect of the terminal groin about 500 ft to the north.

With the exception of the extreme southwest and northeast ends of the island there are no sand dunes or high-tide beach at Hunting. Instead, the subtropical maritime forest vegetation literally falls off into the ocean, creating a bone yard of trees trunks and overturned root systems on the beach.

In order to protect Cabin Road, the beachfront access road to the southern end of the island and the houses located there, the US Army Corps of Engineers has conducted two Emergency Shoreline Protection Projects over the past few years along a 2,500 ft. section of beach where the road is threatened. This work involves dredging about 250,000 cubic yards of sand from Fripp Inlet and pumping it onto the beach at Cabin Road. In addition to this work the SC Dept. of Parks, Recreation, and Tourism, as owner of the island, is planning a large-scale renourishment project that is expected to be under construction by late fall 2005 or winter 2006. In the mean time, Hunting Island remains one of the state's most critically eroded beaches.



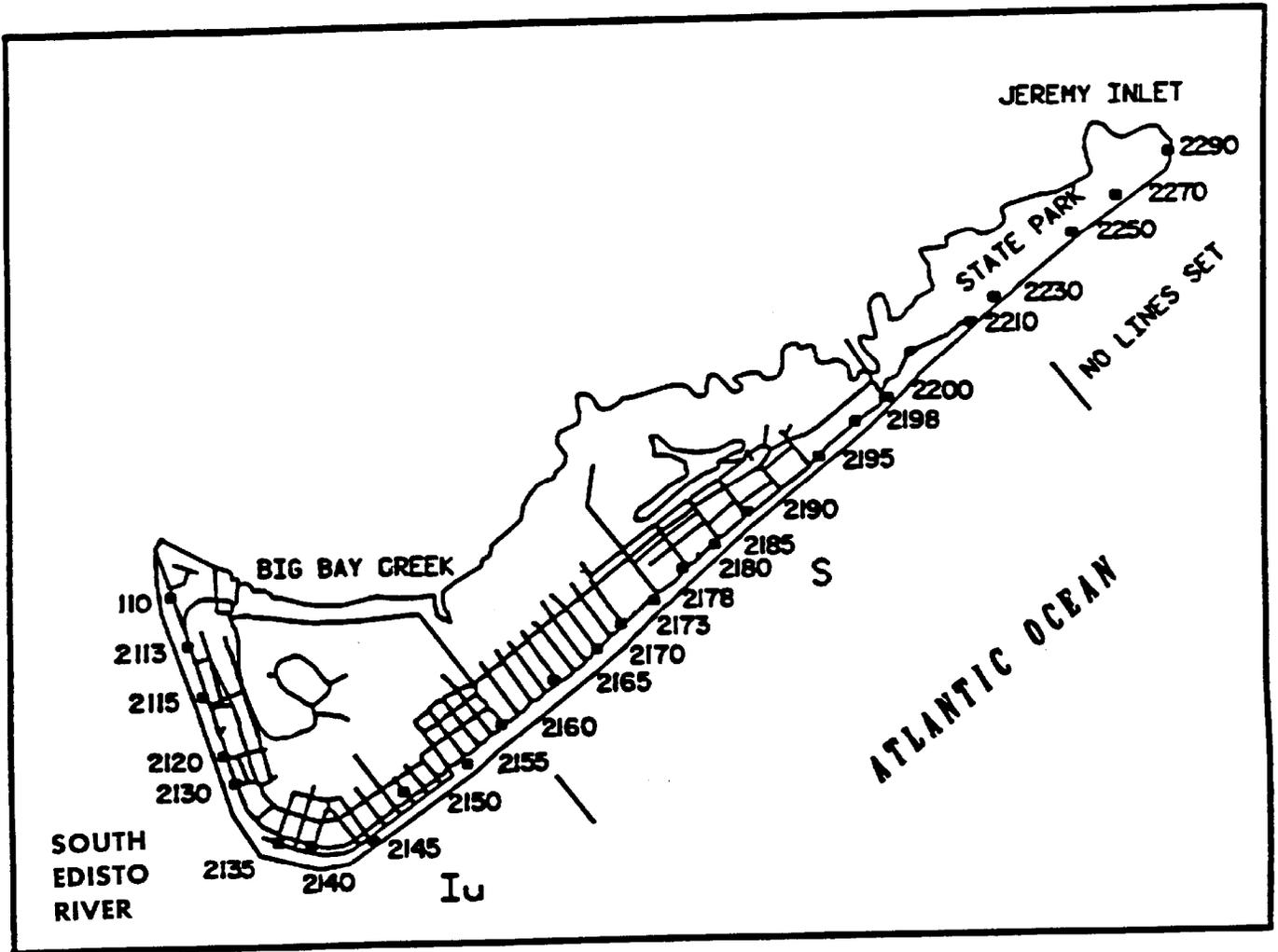
Harbor Island

## ***Harbor Island***

Harbor Island is located between Hunting Island and Johnson Creek to the southwest and St. Helena Sound to the northeast. Beachfront development is primarily single-family residential, with a few condominium buildings. The entire island is classified as an unstabilized inlet zone, and while the shoreline is very dynamic it is generally accretional in the long term. The beach width decreases dramatically from south to north. There are a total of six beach monitoring stations on Harbor Island. Beach survey data was not collected here during the past year, so comments on the relative condition of the beach are based on recent qualitative field observations.

Stations 1900 and 1930 are located at the southern end of the island, where the beach is wide and the long-term trend is accretional. Station 1900 is located closest to Johnson Creek and the beach profile here is extremely wide, over 2000 ft. A series of intertidal sand bars and troughs are constantly shifting back and forth in this area, changing the shape of the lower beach profile. At present a moderate-sized sand bar is located offshore at the heel of the island. At station 1930, near the multi-family units, the beach sand volume is also greater than average and the profile appears to be accretional. The northern end of the offshore sand bar is located just southwest of this station.

The beach width narrows significantly to the north at stations 1960 and 1980, on Harbor Island Drive North. The beach here goes through cycles of erosion and accretion that typically last for a few years. It was erosional during the late 1990's, stabilized in 2001, accreted some during 2002, and now appears to be erosional again. There is still no sand dune here, no dry-sand beach, and the high-tide swash line comes very close to several houses. At station 1995, located where the shoreline begins to curve onto St. Helena Sound, the dune field is wider, with a series of small, well-vegetated dunes. The intertidal beach is fairly narrow but this is typical of an inlet vs. open-coast shoreline. This section appears to be accreting. Station 1998 is also located within the lower wave energy environment of St. Helena Sound, so that the beach profile drops off fairly rapidly. The beach here shows only minor changes from year to year and is stable at present.



Edisto Beach

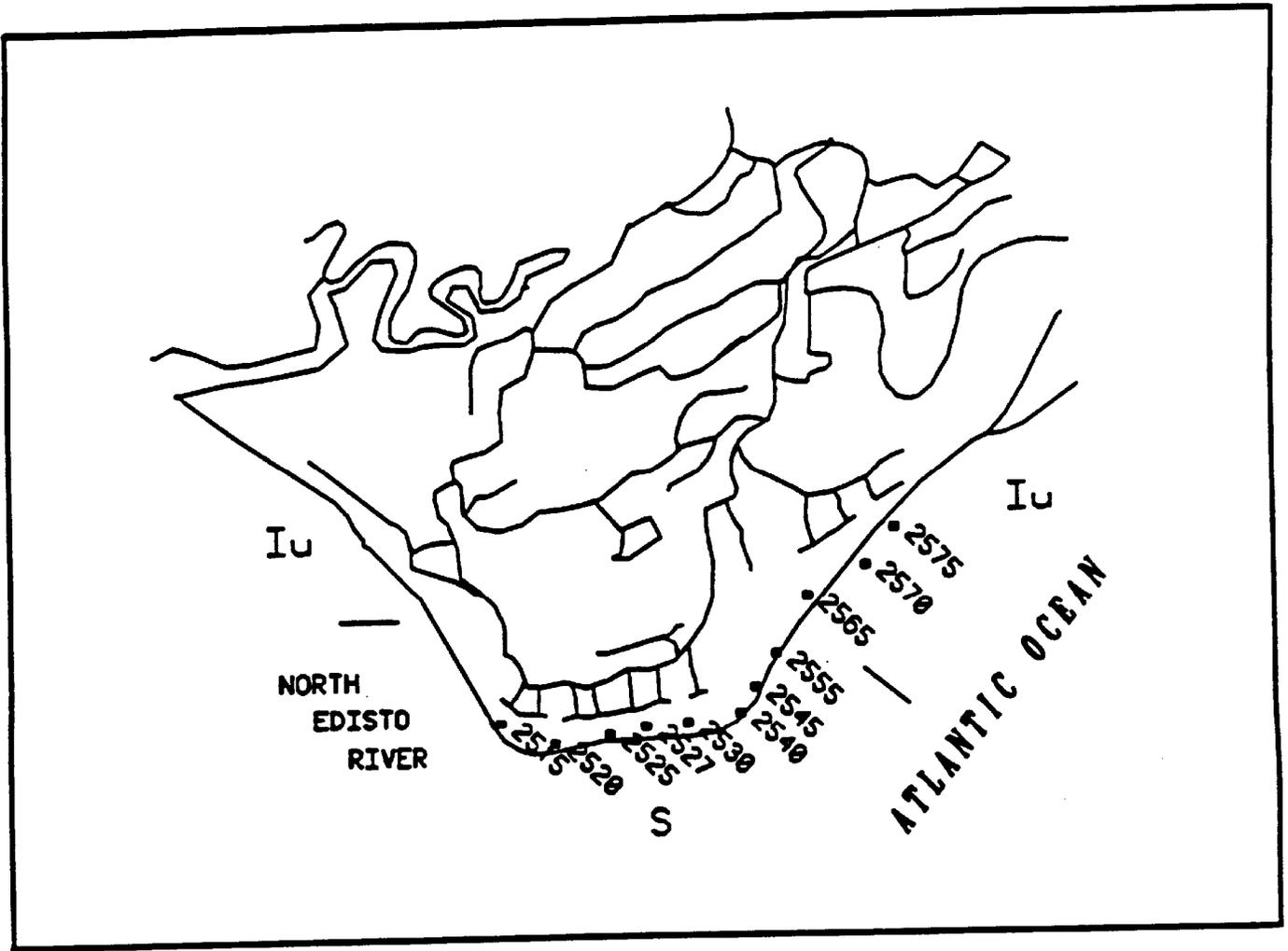
## ***Edisto Beach***

Edisto Beach is a barrier island situated between the South Edisto River and Jeremy Inlet. The northeastern portion of Edisto Beach is a state park, which includes camping sites, while the remainder of the island is primarily single-family residential. An extensive groin field on the island serves to stabilize the shoreline position. South of station 2160 (Marianne St.), the island is classified as an unstabilized inlet zone and is slightly accretional. The rest of the island, including the state park, is a standard zone and with low long-term erosion rates but an extreme lack of sand. There are 27 beach survey monuments on Edisto Beach, which were surveyed in August 2002 and August 2004.

Stations 2110-2130 are located along the South Edisto Inlet shoreline. These stations are sheltered from the open ocean and generally experience only modest seasonal changes on the intertidal beach. Stations 2135 at Edisto Street and 2140 at Billow Street are located on The Point, the shoreline curve between the South Edisto River and the Atlantic Ocean. Historically this section of beach can be very dynamic but has remained stable in recent years.

The oceanfront southern half of Edisto Beach, from stations 2145 to 2165, has the widest oceanfront beach on Edisto. Most stations here experienced only minor seasonal changes through August 2004. The northern half of developed Edisto Beach, from station 2170 to station 2200 at the Pavilion, remains one of the most critically eroded sections of beach anywhere in the state. All stations in this reach suffer from a considerable sand deficit and have virtually no beach at high tide and no protective dune between the ocean and the development. Many houses in this area are located on the active beach, with ocean water surging up under the house pilings during high tide. This area did not experience much erosion through early August 2004, when the most recent survey data was collected, but was hit hard by the hurricanes of late August and September.

Stations 2200 to 2230 in Edisto Beach State Park are comparable to the northern half of Edisto Beach. Beach width is minimal, the dune is maintained by periodic sand scraping, and the campsites and access roads in the park still remain very vulnerable to erosion.



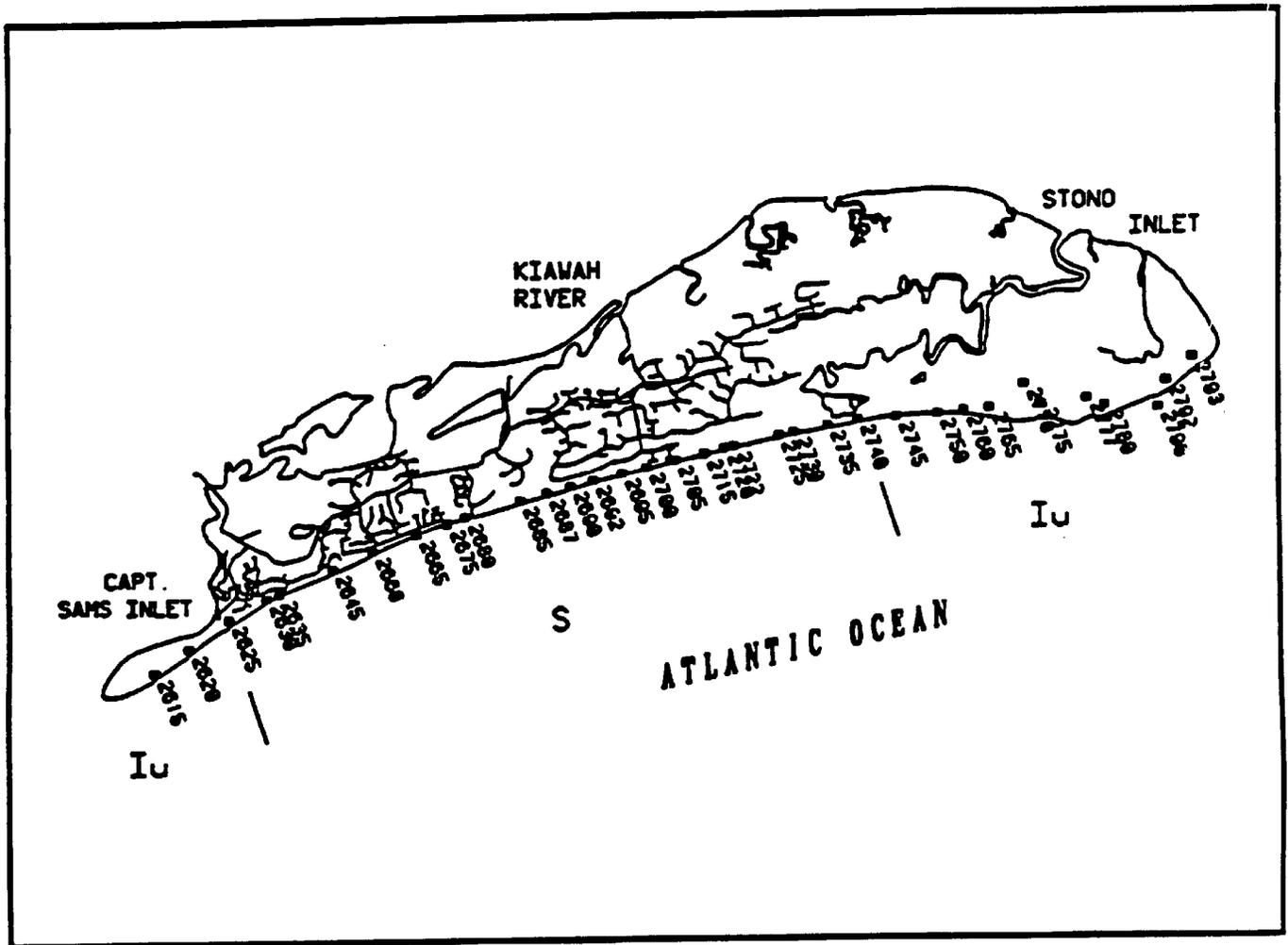
Seabrook Island

## ***Seabrook Island***

Seabrook Island is a barrier island approximately 4 miles long, situated between North Edisto Inlet and Captain Sams Inlet. Development on the island is a mix of single-family and multi-family structures. A continuous 5000-ft section of shoreline is armored with rock revetments and a few seawalls. The entire island is classified as an inlet zone—the armored portion is a stabilized inlet zone, while the remainder is unstabilized. Shoreline change patterns have been quite dynamic over the past 50 years with long-term erosion rates of -2.6 ft per year along the revetment and a “stable” rate to the northeast. There are 11 beach monitoring stations on Seabrook Island. Three of them, stations 2545, 2565, and 2570, were surveyed during August 2002 and June 2004.

Station 2515, at Beach Club Villas along the North Edisto River, is a typical inlet profile—very steep and fairly stable. Stations 2520 through 2540 are located along the revetment, from the Beach Club to Renken Point. This section of Seabrook Island has consistently lacked a dry-sand beach for many years, although the artificial movement of sand to this area from the intertidal portion of the beach to the north, which is much wider, may ultimately correct this situation. Recent changes to the northern flood channel of the North Edisto River give reason to be optimistic about the beach here. The channel has historically been fairly deep and pinched in very close to the shoreline, creating a steep profile and making it difficult to retain a dry-sand beach. But within the past few years the channel has filled in, decreasing in depth from -20 ft to -5 ft. If this trend continues and the channel fills in completely, it may be possible to maintain a dry-sand beach seaward of the revetment here.

In the North Beach area, from station 2545 to 2575, the high-tide beach averages over 500 ft in width. This area is closer to Captain Sam’s Inlet and its nearness to the inlet causes the shoreline to be more dynamic, experiencing episodes of moderate erosion or accretion from one year to the next. However, the substantial width of the dry-sand beach makes these changes of less concern than they might be elsewhere. Station 2545, near Cobia Court, showed a stable dune field and about 100 ft of accretion on the intertidal beach. Stations 2565 near Seascapes Court and 2570 off Oyster Catcher Court also showed a stable dune field but moderate erosion on the intertidal beach.



Kiawah Island

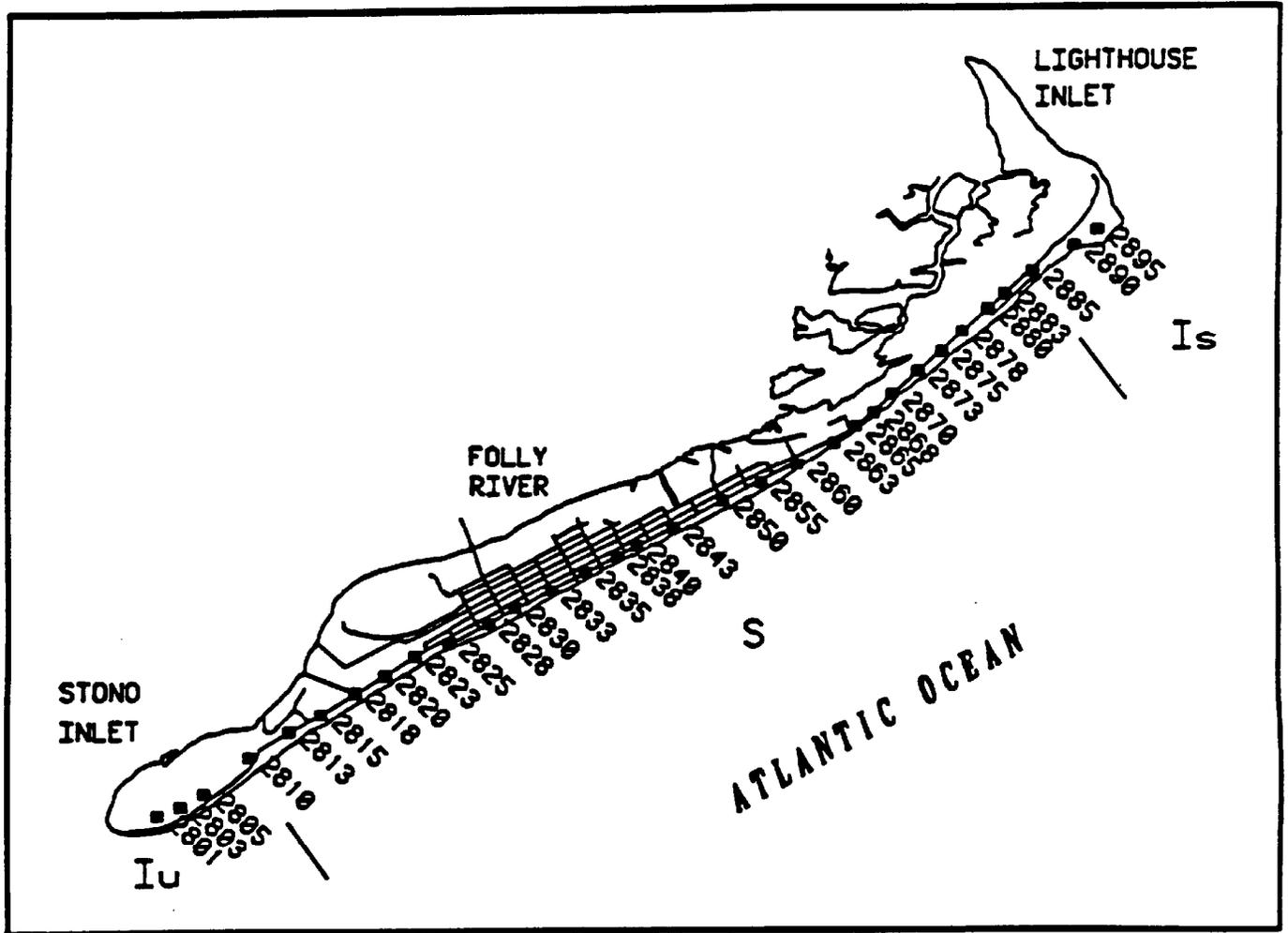
## ***Kiawah Island***

Kiawah Island is a ten-mile long barrier island, located between Seabrook Island and Captain Sams Inlet to the west, and Stono Inlet and Folly Beach to the east. Kiawah is one of the most stable barrier islands in the state, although the eastern and western ends of the island are more dynamic due to their proximity to inlets. Most oceanfront development here is single-family residential, although there are some multi-family residential buildings, commercial structures, a golf course, and a public park. The long-term erosion rate averages a half-foot per year for most of the island.

Twenty beach monitoring stations on Kiawah Island were surveyed in August 2002 and June 2004. Stations 2615 through 2645 are located at the western end of Kiawah, where land use consists of undeveloped property, a beach park, single-family homes, and some multi-family structures. This is usually one of the most stable sections of Kiawah Island. For all stations here the primary dune was stable and the beach profile seaward of the dune showed moderate accretion.

The area from station 2660, near the middle of Eugenia Ave., through station 2680, at the eastern end of Windswept Villas, experienced significant erosion in 1995 and 1996, stabilized from 1997 through 1999, became erosional again in 2000 and 2001, and has been accretional since 2002. From August 2002 through June 2004 the dune field has been stable as the beach seaward of the dune showed minor accretion. Other stations to the northeast, from 2685 on Turtle Beach Lane to 2735 at the Kiawah Beach Club, also showed a stable dune and minor to moderate accretion seaward of the dune.

The condition of the beach changes from stations 2745 to 2780, located along the Ocean Course golf course. Beach profile changes in this region have historically been more dramatic than along the western and central sections of Kiawah. Station 2750 experienced minor erosion seaward of the dune but 2760 near the 18<sup>th</sup> fairway and 2765 near the Ocean Course Clubhouse both experienced about 75 to 100 ft of dune and upper beach erosion during the past two years. Stations 2775 to 2785 are closest to Stono Inlet and are the most dynamic, as the profile changes in response to movement of the sand bars associated with the inlet. These stations were not surveyed during the past year.



Folly Beach

## ***Folly Beach***

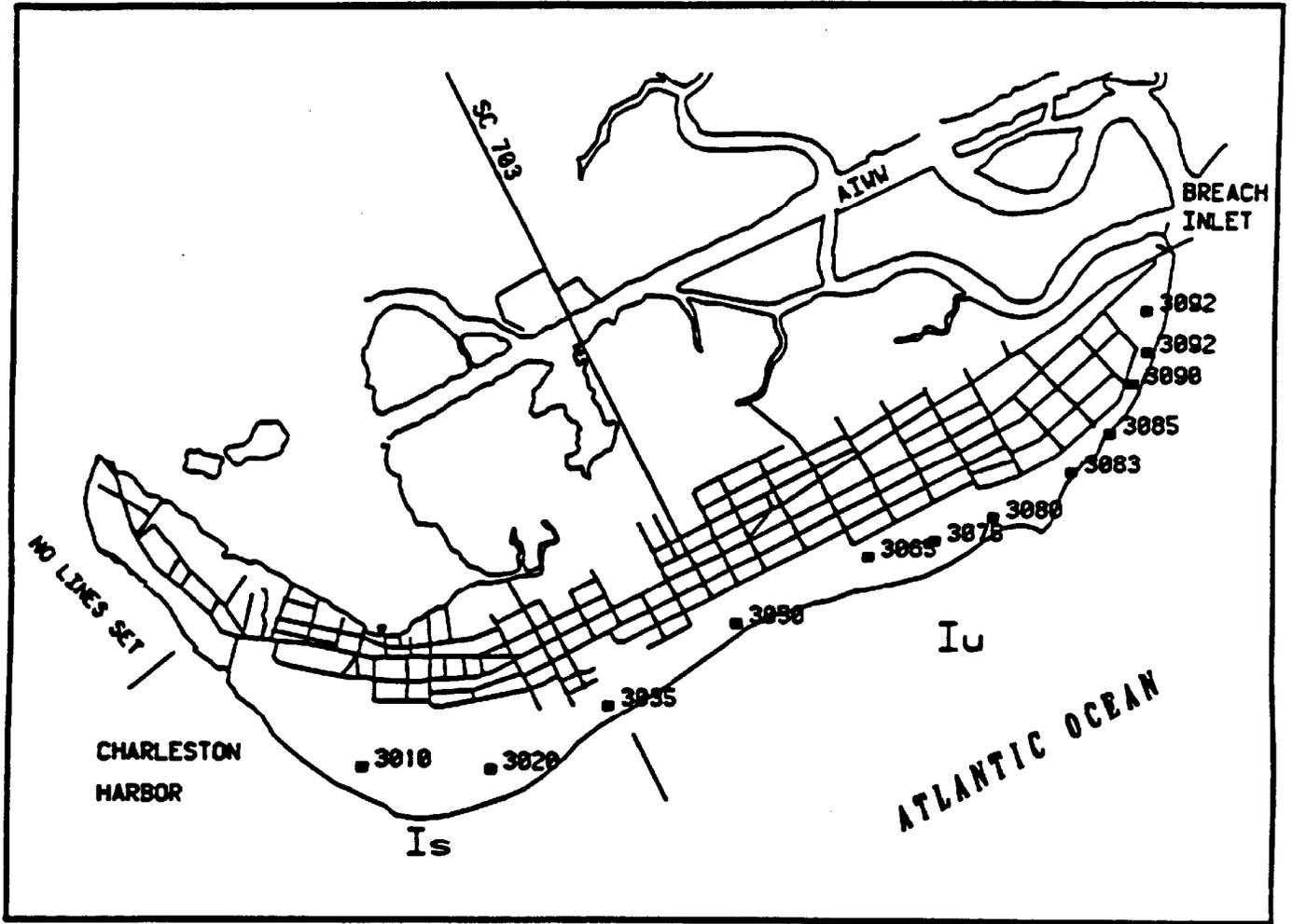
Folly Beach is located between Stono Inlet and Kiawah Island to the southwest, and Lighthouse Inlet and Morris Island to the northeast. Nearly all of Folly's shoreline is armored and contains groin fields. Oceanfront development is mostly single-family residential, with one large condominium and one large hotel in the center of the island, a public park at the southwest end, and a large tract of undeveloped property at the northeast end. Long-term erosion rates are 1-3 ft per year. Folly Beach is scheduled for renourishment in the spring of 2005. There are 33 monitoring stations here that were surveyed in August 2002 and June 2004, prior to the start of the 2004 hurricane season.

At the western end of the island in the county park, station 2805 reversed a trend of significant erosion that began in 1995 and actually gained about 200 ft of beach through June 2004. The other station in the park, 2810 at the gatehouse, showed no change. Most other stations on the western section of Folly Beach, from station 2813 just outside the park to station 2820 at 6<sup>th</sup> St. West, were fairly stable and showed only minor changes seaward of the buried line of revetments and seawalls. Erosion dominated at the next three stations, from 2823 at 4<sup>th</sup> St. West to 2828 in front of the Holiday Inn seawall. In this region the upper beach berm eroded back by about 50 ft.

The next section of beach is the first twelve blocks east of the Holiday Inn, up to the Washout. Stations 2830 to 2855 are located here, with a moderate dune over or seaward of the line of rock revetments. Almost all profiles in this area were stable between August 2002 and June 2004.

The next area, commonly referred to as the Washout, extends from station 2860 through 2873. The ocean is closest to the road in this section of beach, and there are no residential lots on the seaward side of Ashley Ave. All stations here experienced erosion seaward of the rock revetment as the beach cut back by 50 to 100 ft. This erosion continued down the entire profile, from the +3 ft contour out to a depth of -13 ft.

The region east of the Washout, stations 2878-2890, experienced a general trend of accretion from 1993 through 1997 then became severely erosional, with the amount of erosion increasing with movement toward the east (that is, as monitoring station distance from the Washout increases). Station 2878 near house #1639 was fairly stable, showing some minor erosion from the dune crest down to the -12 ft contour. Station 2880 near house #1673 eroded back 60 ft from the dune crest to the -12 ft contour. At station 2883 near house #1689 the beach eroded back 50 ft from 2002 through 2004, and almost 100 ft from 2000 through 2004. This trend only worsened at stations 2885 near the beach access parking lot and 2890 on the former Coast Guard base property. In this area the beach eroded back by 70 ft from 2002 through 2004 and by over 150 ft from 2000 through 2004. This erosion extends along the entire profile, from the dune scarp out to an offshore depth of -13 ft. Hurricane-related erosion following the June 2004 surveys only worsened this situation. It is estimated that an addition 20 cubic yards per ft of sand was lost during the storms of August and September 2004.



Sullivan's Island

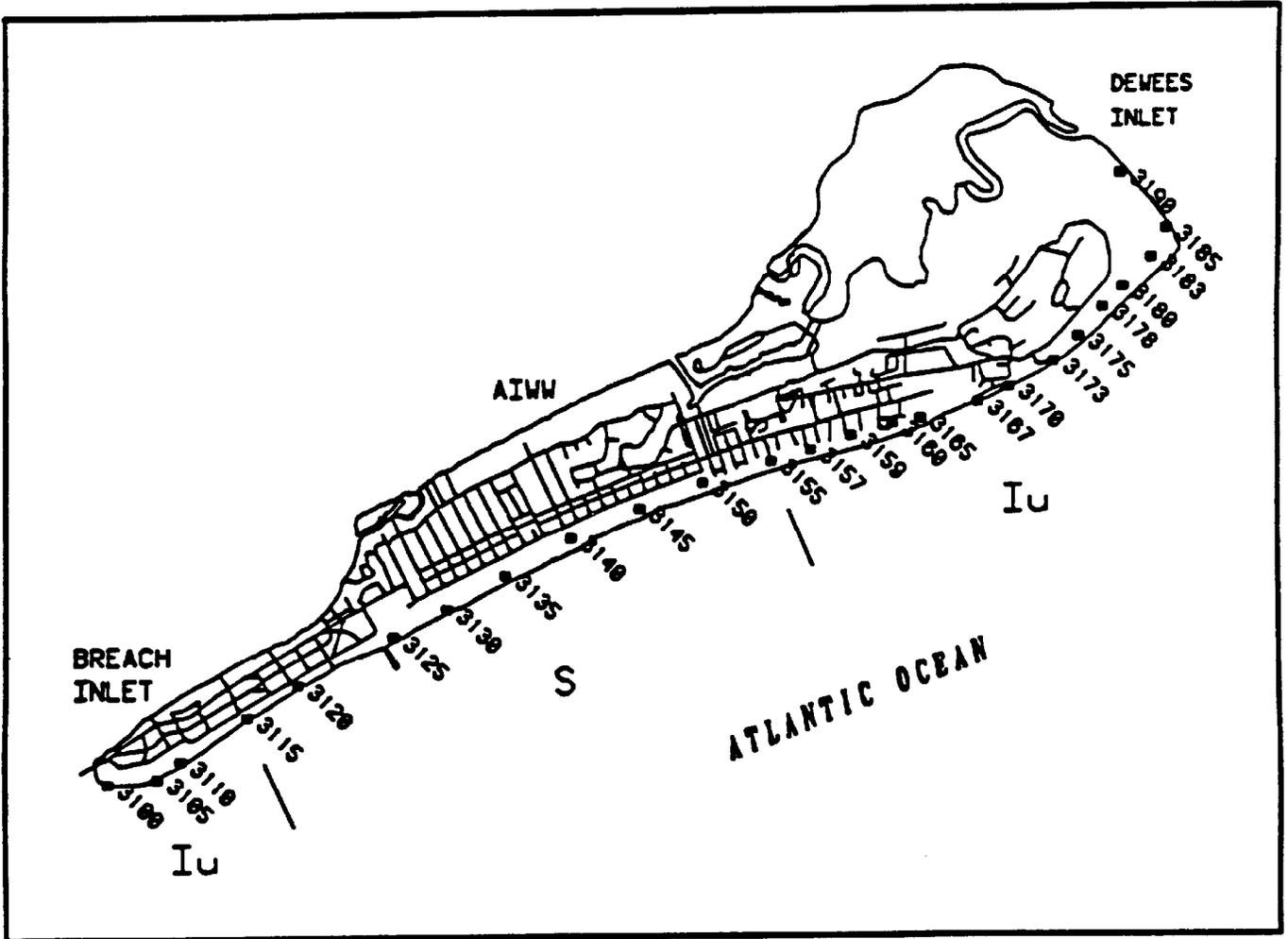
## ***Sullivans Island***

Sullivans Island is located between Charleston Harbor and Breach Inlet. The Charleston Harbor north jetty, which comes ashore on Sullivans Island, has caused the long-term shoreline trend to be stable or accretional for much of the island. Periodic shoal attachment and movement of the channel at Breach Inlet can cause the shoreline in this region to be quite dynamic, and the long-term erosion rate here is -2 ft per year. Beach surveys were conducted at 3 of 10 monuments in the center of the island in July 2002 and August 2004, so comments for the rest of the island are primarily based on qualitative observations about the condition of the beach.

Survey monuments 3010-3035, between Station 16 and Station 19, are located within the Charleston Harbor north jetty. This area is extremely accretional in the long-term but has been stable to slightly erosional for the past several years. However, the tremendous beach buildup over the past century still leaves this as one of the widest beaches in South Carolina, as measured from the row of oceanfront houses out to the high-tide swash line.

Survey monuments 3050-3080 are located along the center section of Sullivans Island. The area is outside the north jetty and sand shoals from Breach Inlet periodically attach to the beach here, so that long-term trends are accretional but the shoreline is quite dynamic. The three monuments here that were surveyed in 2004, 3050 at Station 22½, 3065 at Station 26, and 3080 at Station 28, all show dune and upper-beach accretion.

Monument 3083 at Station 29 marks the transition point between the accretional center section of the island and the erosional northeastern end of the island along Breach Inlet, where the long-term erosion rate is -2 ft per year. The beach at 3083 has been fairly stable in recent years but the beach at 3085 near Station 30, 3090 near Station 31, and 3092 near Station 32 has been seriously eroded for several years. These survey monuments are all located close to Breach Inlet and continue to show steep and narrow inlet profiles with a sand deficit, no dune, and no high-tide beach. This 3-block section of Sullivans Island, about 2,000 ft long, is one of the most critically eroded beaches in Charleston County.



Isle of Palms

## ***Isle of Palms***

The Isle of Palms is located between Breach Inlet and Sullivans Island to the southwest, and Dewees Inlet and Dewees Island to the northeast. The island is generally accretional, primarily because the downdrift Charleston Harbor jetties interrupt the longshore flow of sand from north to south, and the official long-term shoreline change rate is stable to accretional. There are 22 monitoring stations on the Isle of Palms, which were surveyed in August 2002 and August 2004.

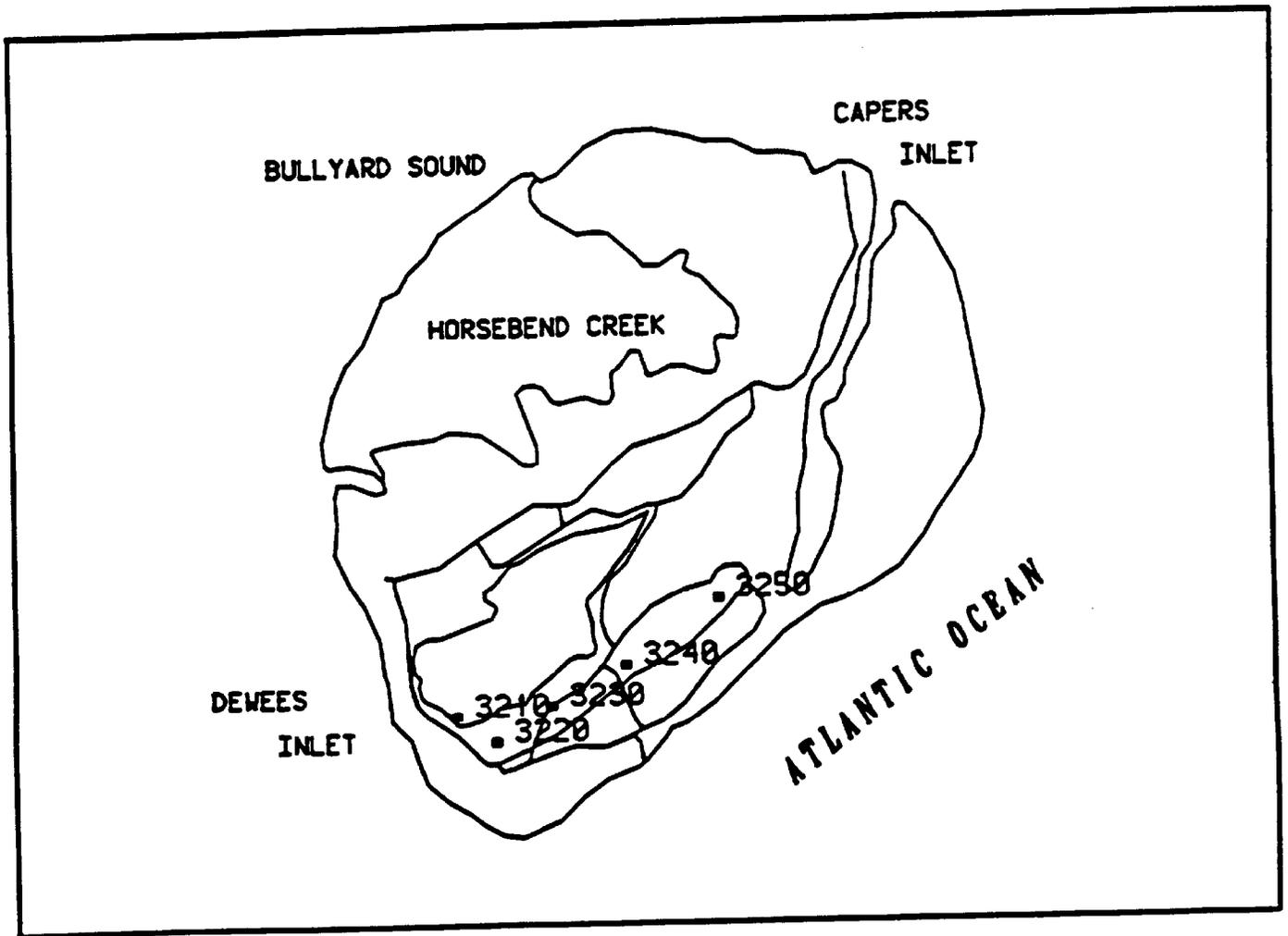
Stations 3100-3110, from Breach Inlet to 3<sup>rd</sup> Ave., are influenced by the inlet's channels and shoals and are usually more dynamic than the central portion of the island. This area is strongly accretional in the long term but did experience some minor erosion on the upper beach last year.

Stations 3115-3155, from 6<sup>th</sup> Ave. to the Citadel Beach Club, are located along the more stable portion of shoreline in the center of the island. Beach profiles here typically show a well-defined primary sand dune and only minor to moderate seasonal variations from year to year, although an occasional hotspot will crop up. This area was stable to slightly accretional during the past year, with no stations showing any erosion.

Beginning at station 3157 near 50<sup>th</sup> Ave. and continuing on into Wild Dunes, beach profiles are close enough to Dewees Inlet to be effected by periodic bar bypassing from the inlet shoal complex, and as a result profiles here are more dynamic than the rest of the island. These shoal attachment episodes cause extreme accretion in the area of shoal attachment and severe but localized erosion immediately adjacent to the attachment site. These shoal attachment episodes occur about every 6-8 years and last about 18 months, with the most recent event terminating in the fall of 1996.

For the current report period, station 3157 at 50<sup>th</sup> Ave. experienced some moderate accretion on the intertidal beach. Stations 3159 at 53<sup>rd</sup> Ave. and 3165 near 57<sup>th</sup> Ave. were more stable, with only minor accretion seaward of the dune. Station 3167 at the southwest end of Beachwood East experienced almost 150 ft of erosion seaward of the dune, from the +5 ft contour down to the -10 ft contour. By contrast the beach profile seaward of the revetment at station 3173, near the Property Owners Clubhouse, was relatively stable, but lacks any dry-sand beach seaward of the sloping rock wall. Like 3167, the profile at station 3175 near Mariners Walk also experienced erosion from the +6 ft contour down to the -8 ft contour.

The last two stations on the Isle of Palms were the most erosional. The dune field at station 3178, near SummerHouse condominiums, is fairly wide and is mostly unvegetated, so that wind-blown sand can shift around from one survey to the next. The seaward portion of this unstable dune field experienced major erosion, cutting back by about 150 ft from the +6 contour down to the -8 ft contour. Finally, station 3180 at Port O'Call condominiums also lost about 150 ft of beach as the most seaward dune, with a crest elevation of +7 ft, disappeared.



Dewees Island

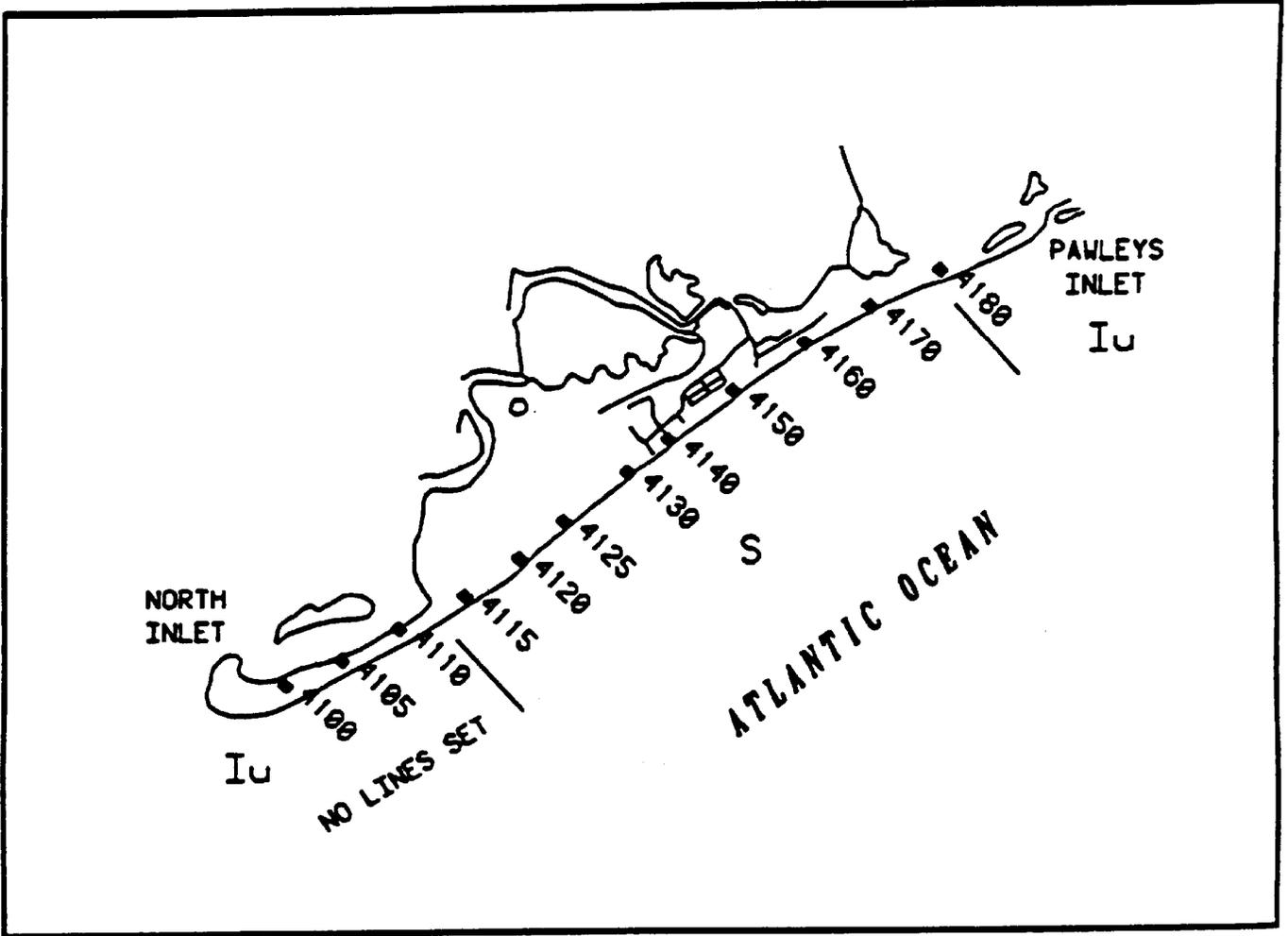
## ***Dewees Island***

Dewees Island is located between Dewees Inlet to the southwest, and Capers Inlet to the northeast. The island is approximately two miles long, and is classified as an unstabilized inlet zone. The shoreline is very dynamic, with long-term erosion rates of -3 to -12 ft per year, although in recent years the entire island has been accreting. There is limited single-family development here. There are 9 monitoring stations on Dewees Island, which were surveyed in November 2003 and October 2004.

Station 3220 is located on top of a bluff along Dewees Inlet. The beach here can be very dynamic but was fairly stable in 2004 and showed only minor changes. Station 3230 also showed very little change through October 2004. At 3240 a newly emerging dune field continued to grow seaward of the larger, more landward dune, but the profile also experienced about 50 ft of erosion on the upper intertidal beach.

Erosion was much more extreme in the center of the island. The next 2 stations, 3250 and 3255, lost about 150 of beach as a significant dune at 3255 with a crest elevation exceeding 10 ft was completely lost. Erosion tapered off some at 3260, where the beach cut back by about 75 ft. Station 3270 showed a substantial gain of sand, as the primary dune increased in height by several feet and the seaward end of the profile accreted, particularly below the 0 ft contour.

Station 3280 is close to Capers Inlet and has a very wide profile that extends several hundred ft offshore. The seaward portion of this profile was rather dynamic during the past year but showed no significant changes. The last monitoring station, 3290, is located on Capers Inlet. The primary dune here is usually quite stable, while seaward of the dune a large sand flat, most of it intertidal, extends offshore for hundreds of feet. During the past year the primary dune was again very stable and the large offshore sandbar was pushed farther landward by wave action. The trough separating this bar from the beach should fill in soon as the bar welds onto the shore as part of a natural beach renourishment.



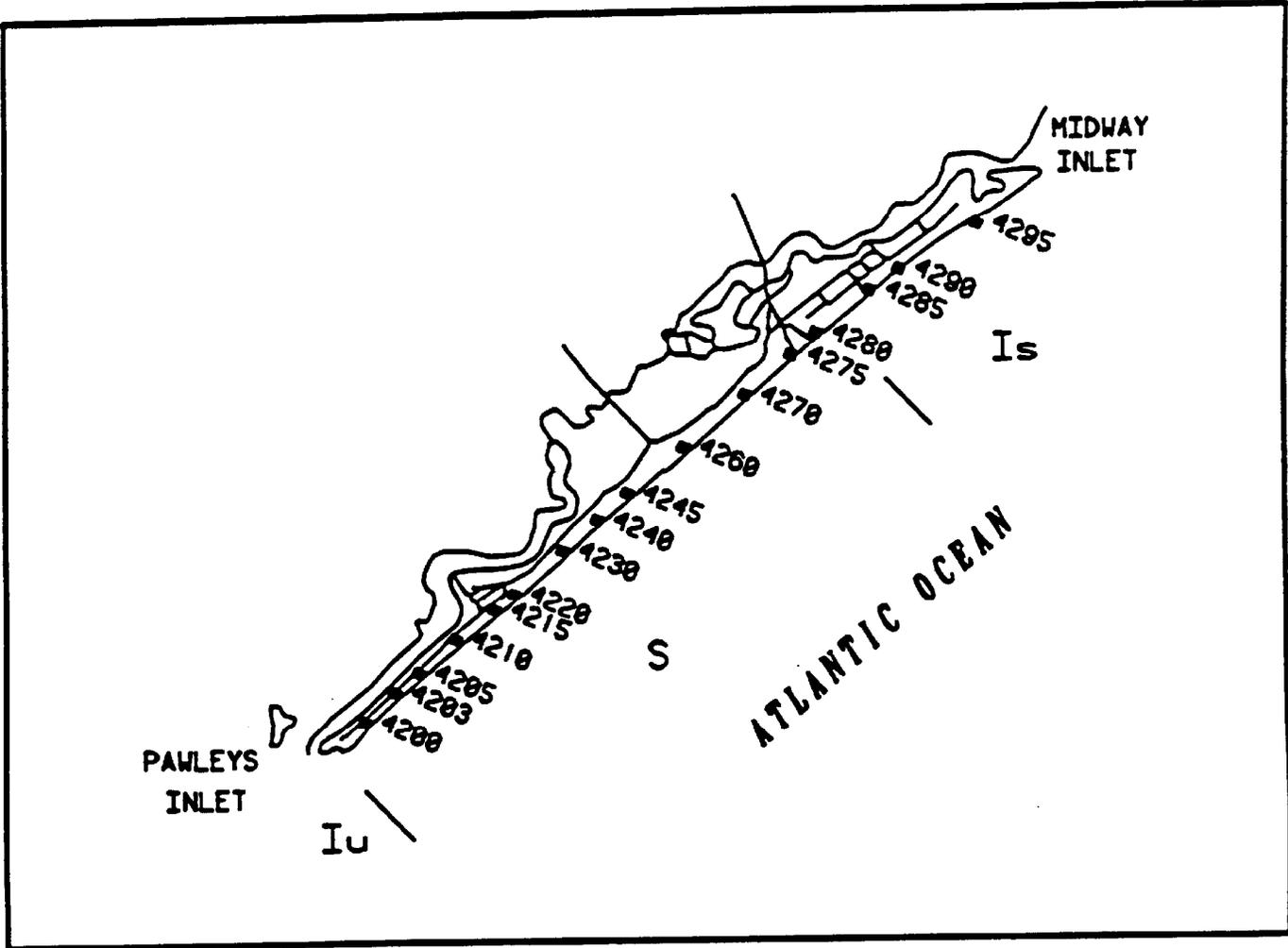
Debidue Island

## ***Debidue Beach***

Debidue Beach, located between North Inlet and Pawleys Inlet, is the southernmost of the Grand Strand beaches. The central portion of Debidue is armored with a continuous 4500-ft long bulkhead. The area south of the bulkhead has experienced long-term erosion rates of -8 to -12 ft per year, while the area north of the bulkhead is stable to accretional. The southern half of Debidue Beach is scheduled for renourishment in the spring of 2005. Stations here were surveyed in April 2003 and May 2004.

At station 4125, about 1,000 ft south of the bulkhead, the long-term trend is erosional but the dune remained stable through May 2004. Much farther seaward the beach profile from the -5 ft contour down to the -10 ft contour eroded back by about 50 ft. At the south end of the bulkhead station 4130 continued to lose sand due to erosional scour at the toe of the bulkhead. This south bulkhead section of beach has historically been the most critically sand-starved beach profile at Debidue. Station 4140, near the northern end of the bulkhead, was stable on the upper beach but like station 4125 saw some offshore erosion between the -5 ft and -10 ft contours. This station is the “pivot point” on Debidue—the beach typically erodes to the south and accretes to the north.

Stations 4150-4180 are located north of the bulkhead. This is a mostly undeveloped area with an extensive dune field, and historically the beach is usually quite stable. From April 2003 through May 2004 the dune field once again remained unchanged and the upper beach experienced some degree of accretion, typically at the seaward end of the dry-sand berm.



Pawleys Island

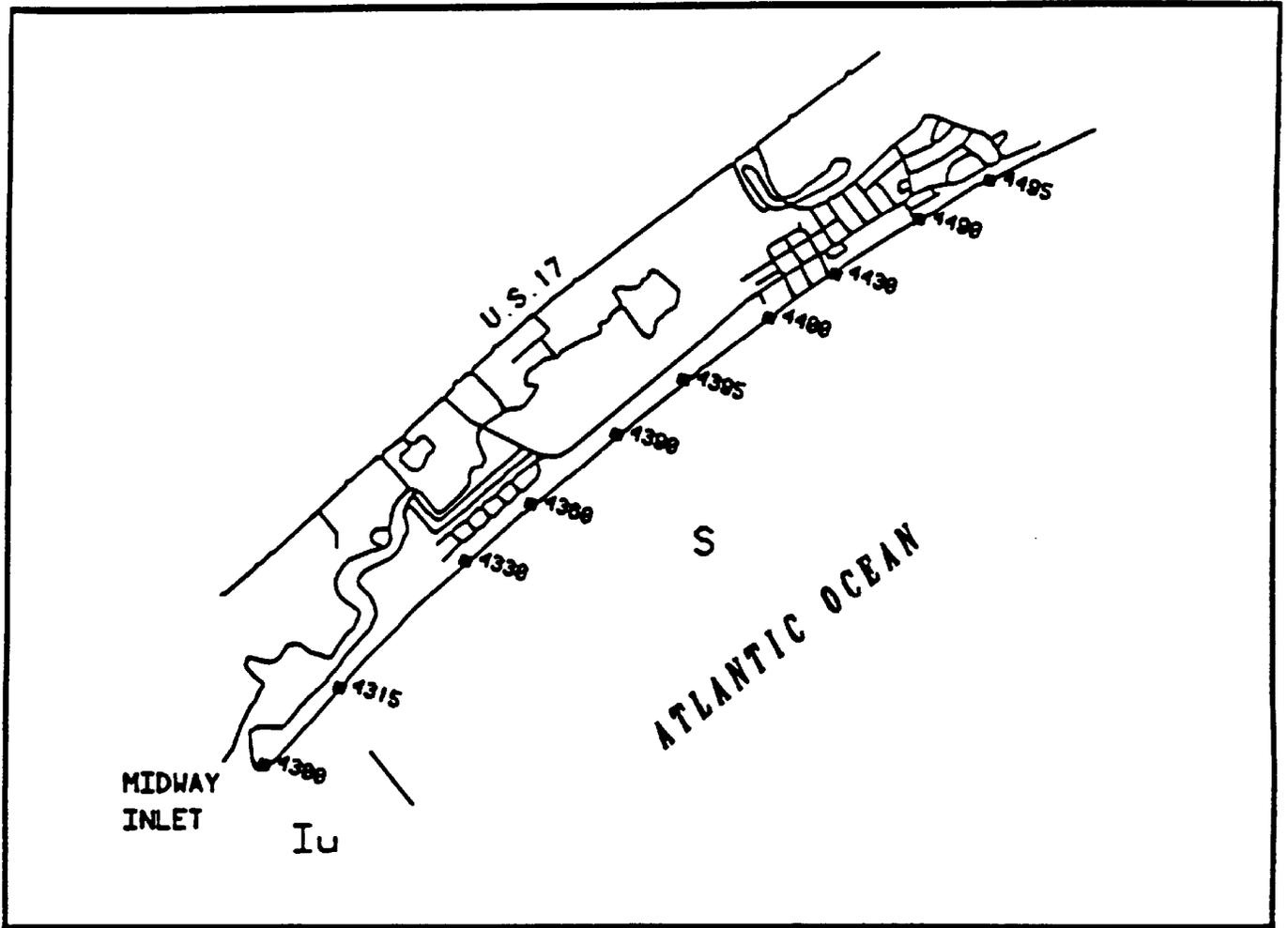
## ***Pawleys Island***

Pawleys Island is located between Pawleys Inlet and Midway Inlet. Groin fields on Pawleys have counteracted a slight erosional trend to produce a stable shoreline with an official long-term erosion rate of zero. The southern portion of Pawleys is low-lying, with little or no sand dunes. The central portion has some of the highest dunes in the state, while the northern, accretional end has a wide field of low dunes. A beach renourishment project using sand borrowed from the sand spit at the southern end of the island was completed in 1999. Sixteen monitoring stations at Pawleys were surveyed in April 2003 and April 2004.

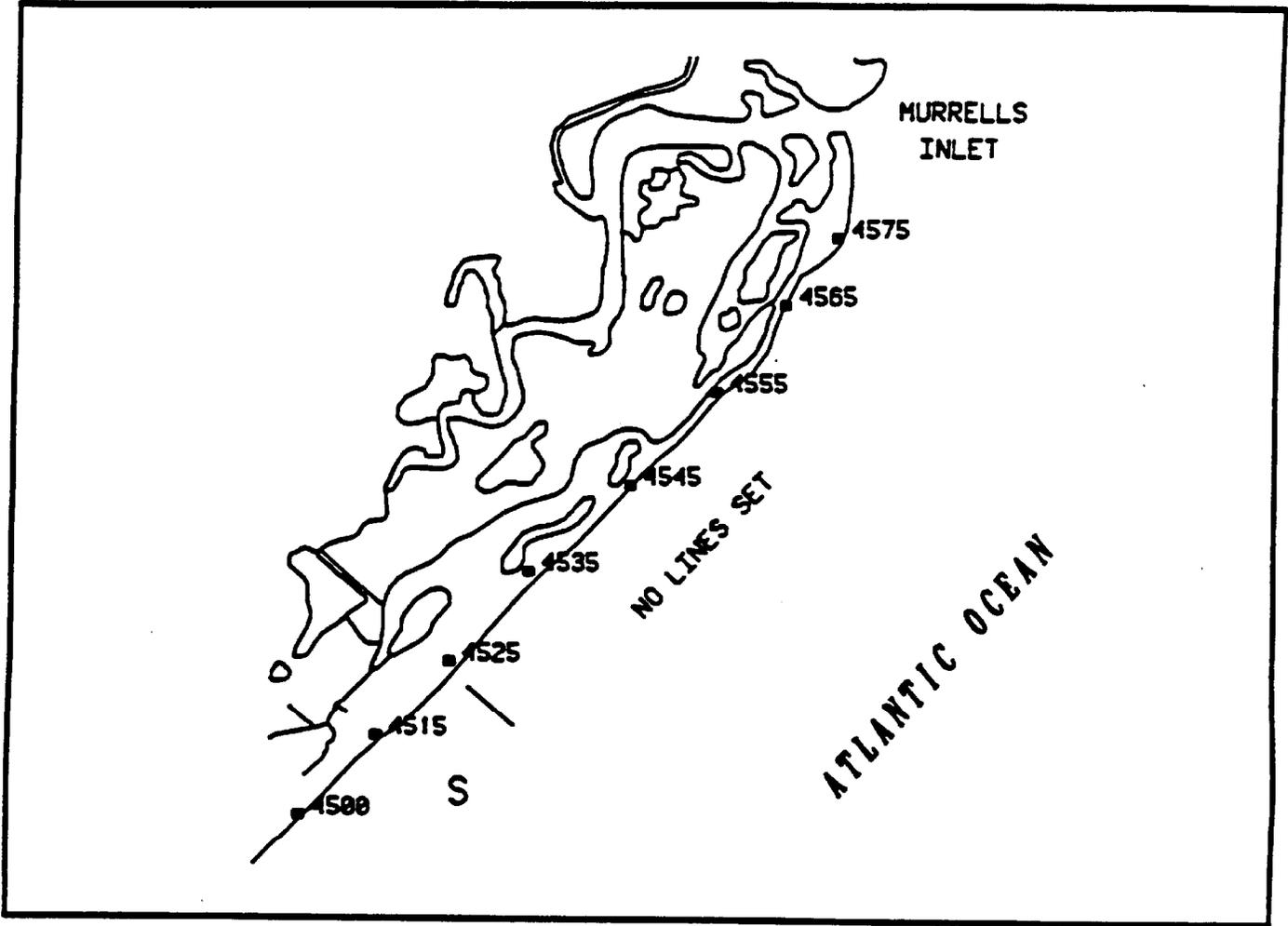
While there are no monitoring stations at the southern end of the island, it is apparent from visual observations that the dune in the public parking area has been chronically eroded for the past few years, and the southernmost groin cell, where the last 13 houses on Pawleys are located, still has no sand dune. Stations 4200-4220 are the 6 monitoring sites located north of this groin cell, in the developed, low-lying southern end of Pawleys Island. In this region the moderate-sized primary sand dune has been quite stable through April 2004, and the intertidal beach has experienced some minor changes between the +5 ft and -5 ft contours.

The central portion of Pawleys Island, with a large primary dune, is represented by stations 4230-4280. Most of the profile stations here were fairly stable, gaining or losing a small amount of sand on the beach seaward of the +5 ft contour. Historically, this entire section of beach has always been the most stable portion of Pawleys Island. It shows little change from year to year, has an adequate sand volume, and, in most places, a massive sand dune.

Stations 4285 to 4295 are located closest to Midway Inlet, where the beach is much wider and is generally more dynamic. The long-term trend here is accretional, and most houses are several hundred feet landward of the high-tide water line. The upper beach was stable during 2004 and station 4290 showed the only significant lower-beach change, with about 80 ft of erosion between the -5 ft and -10 ft contours.



Litchfield Beach



Huntington Beach State Park

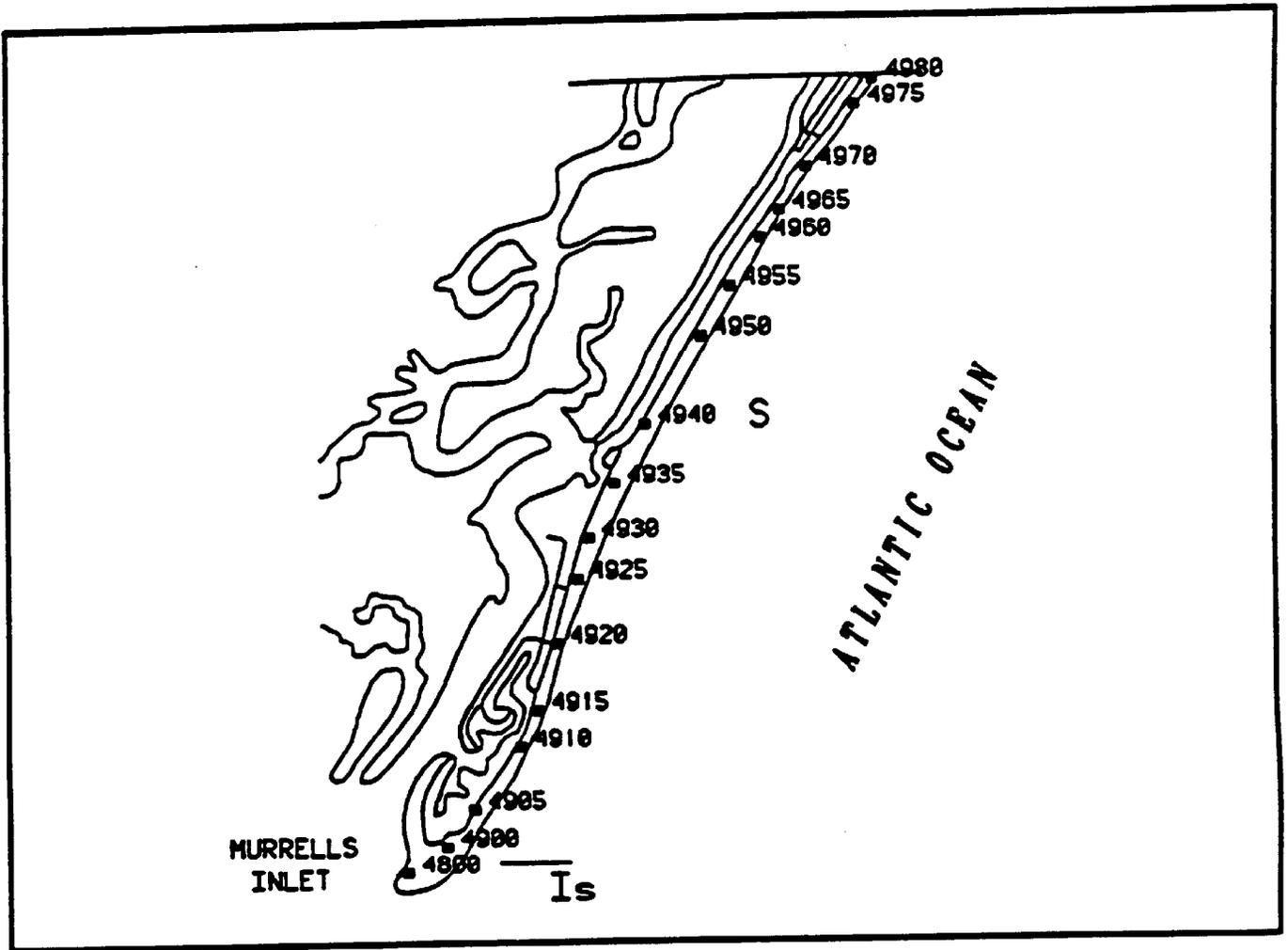
### ***Litchfield Beach/Huntington Beach State Park***

Litchfield Beach, North Litchfield, and Huntington Beach State Park represent a continuous, uninterrupted sediment budget compartment. This area is bounded by Midway Inlet to the south, and Murrells Inlet to the north. The southern spit at Litchfield is a low-lying area with a small dune field, while the central portion of this reach contains a large, well-defined primary dune, one of the largest in the state. The official long-term shoreline trend is “stable” for this entire area, and in fact, Litchfield Beach and North Litchfield Beach are among the most stable beaches in South Carolina. All stations here have a significant primary dune that generally shows no sign of erosion from year to year, and changes to the beach profile are usually limited to minor sand gains or losses on the active beach seaward of the dunes. The northern reach, in the state park, is directly influenced by Murrells Inlet and the south inlet jetty. Beach surveys here were taken at 17 stations in April 2003 and May 2004.

During the past year stations 4315-4495 in Litchfield and North Litchfield showed an extremely stable dune field and some moderate accretion on the intertidal beach between the +5 ft contour and the -2 ft contour.

Stations 4500-4565 are located in Huntington Beach State Park. In the southern end of the park, stations 4500, 4515, and 4525 are morphologically similar to North Litchfield Beach. They have a stable, well-defined dune and experienced some moderate accretion between the +5 ft and -2 ft contours during the past year.

As proximity to Murrells Inlet increases the primary dune becomes somewhat smaller and the shoreline can become more dynamic, although the inlet itself is stabilized by jetties that were constructed in the early 1980's. The profile at station 4535 showed virtually no change during the past year. At stations 4545 and 4555 the dune field remained stable while the upper and intertidal beach experienced some moderate changes. The biggest change occurred at station 4565, just north of the vehicular beach access path, where the dune remained stable but the upper beach just seaward of the dune accreted by about 75 ft between April 2003 and May 2004.



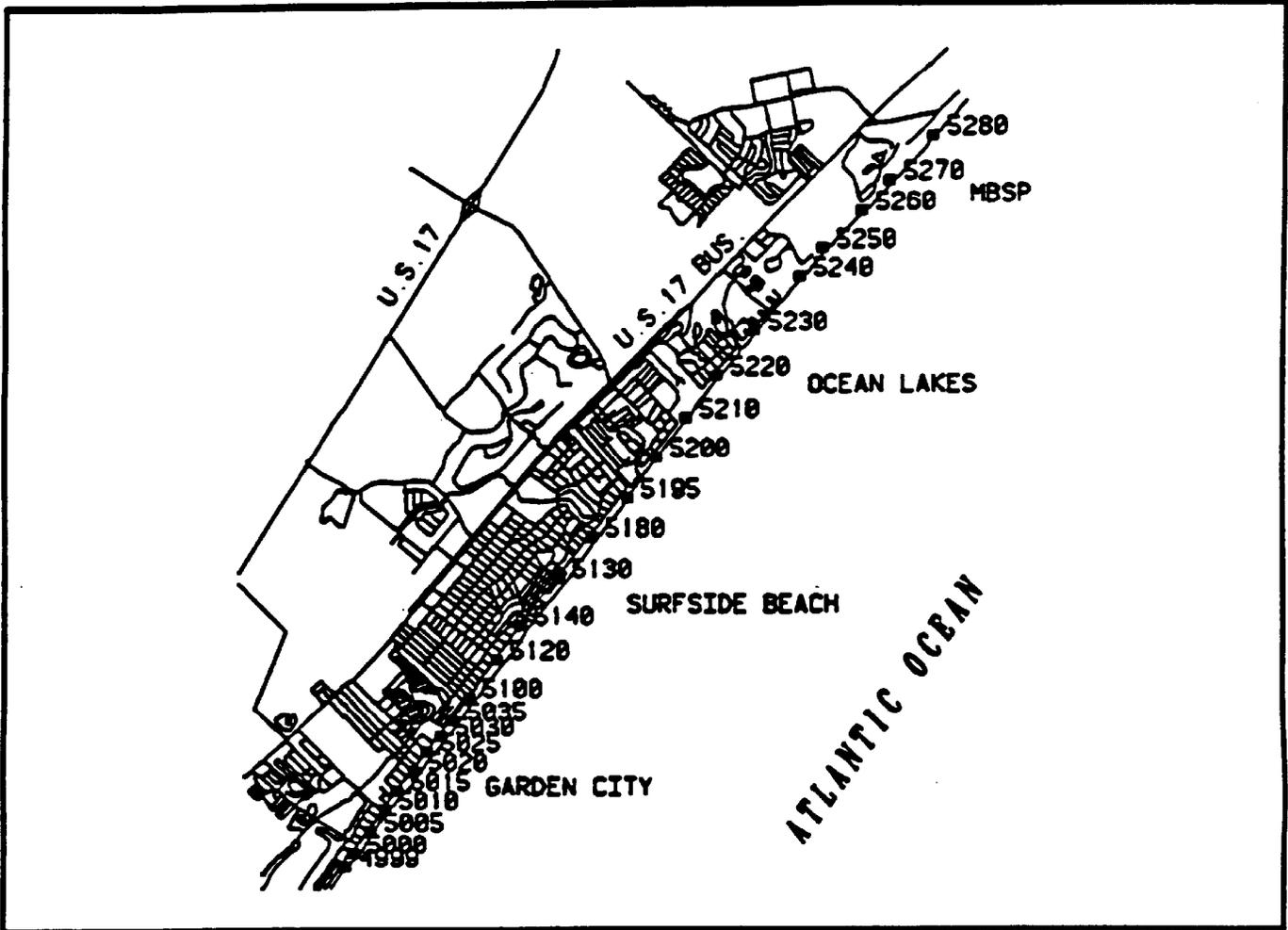
Garden City (Georgetown County)

## ***Garden City Beach***

This section of shoreline begins at Murrells Inlet and extends northward to the southern limit of the Town of Surfside Beach. The southern half of Garden City, from station 4900 to 4955, contains few shore-protection structures, while in the northern half, between stations 4960 and 5030, seawalls and bulkheads become predominant. Generally, sand volumes are adequate in the unarmored section of Georgetown County, begin to decrease in the armored section of Georgetown County, and reach a minimum in the armored section of Horry County. The long-term erosion rate is about -1.5 ft per year. Much of Garden City was renourished in 1998 as part of the Army Corps of Engineers Grand Strand Renourishment Project, and the very southern end of Garden City, closest to Murrells Inlet, was renourished with 100,000 cubic yards of sand in 2003. There are 24 monitoring stations here, which were surveyed in January 2003 and May 2004.

Most stations in the standard zone from 4900 through 4955 are unarmored, have a well-defined dune, and are fairly stable. Historically the only exception is found along a 2000 ft section of beach south of Pompano Drive, between stations 4910 to 4920, where the shoreline is armored and curves seaward and the beach is narrower and more vulnerable. This is the area that was renourished in 2003, and while some of this renourishment sand has been lost as the berm cut back by 25 to 50 ft, the beach here is still in much better condition than it was in 2002. The other monitoring stations in this general area all experienced minor berm and intertidal profile accretion, say 20 to 30 ft.

North of station 4960 the shoreline is predominantly armored and the beach width decreases. Stations 4965 through 4999, in Georgetown County, and station 5000, in Horry County just south of the pier, still show a minimal dry sand beach seaward of a small dune or bulkhead. During the past year all stations here experienced some moderate upper-beach accretion, ranging from 30 to 40 ft. Stations 5005 to 5035, the northernmost section of Garden City in Horry County from the pier to Melody Lane, are mostly armored and lack a dune but have a minimal dry-sand beach. The 1998 renourishment project has not performed as well here, and while profiles showed moderate erosion in 2002 they actually accreted by 20-30 ft on the upper beach berm during 2004, a trend that was seen for virtually all of Garden City Beach.



Garden City (Horry County)  
 Surfside Beach  
 Unincorporated Horry County--South

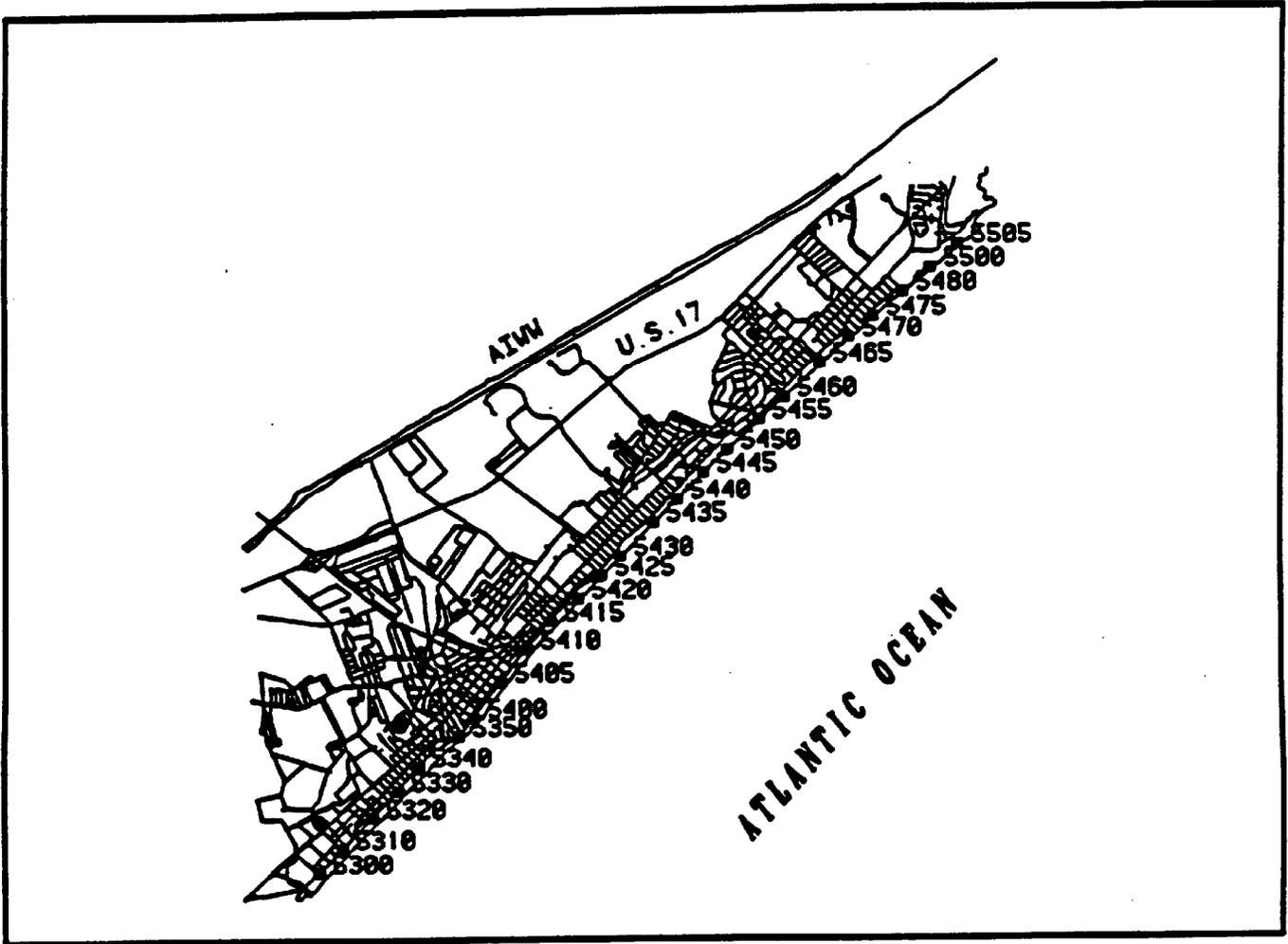
### ***Surfside Beach and Unincorporated Horry County—South***

This section of the Grand Strand includes 6 monitoring stations in the Town of Surfside Beach, and 9 stations in the unincorporated region north of Surfside Beach—the campground region, Long Bay Estates, and Myrtle Beach State Park. Surveys here were completed in January 2003 and May 2004. The long-term erosion rates here are around one foot per year, and in general the beach is stable.

Stations 5100 at 16<sup>th</sup> Ave. South through 5195 at 16<sup>th</sup> Ave. North fall within the Town of Surfside Beach, and almost all stations here have a well-established primary sand dune. Surfside Beach was renourished in 1998 as part of the Army Corps of Engineers Grand Strand Renourishment Project, and the project reached equilibrium within a few years. Every station here actually gained sand on the upper beach between January 2003 and May 2004, as the berm width increased by 20 to 45 ft. The survey data also shows minor changes on the intertidal portion of the beach profile.

Stations 5200 to 5230 are located in the campground section. Every station here has a well-established dune except for 5220, which is armored with a rock revetment. From January 2003 to May 2004 the upper-beach profile in this area also consistently accreted by 20 to 45 ft.

In Myrtle Beach State Park the profiles all have a well-established dune, and the beach is usually very stable. This area was not directly renourished in 1998, although it probably received an indirect benefit from renourishment to the north and south. Stations 5250 to 5270 are located here, and showed only minor changes in 2004. At station 5280, located at the Springmaid fishing pier, the beach profile was also fairly stable.



Myrtle Beach

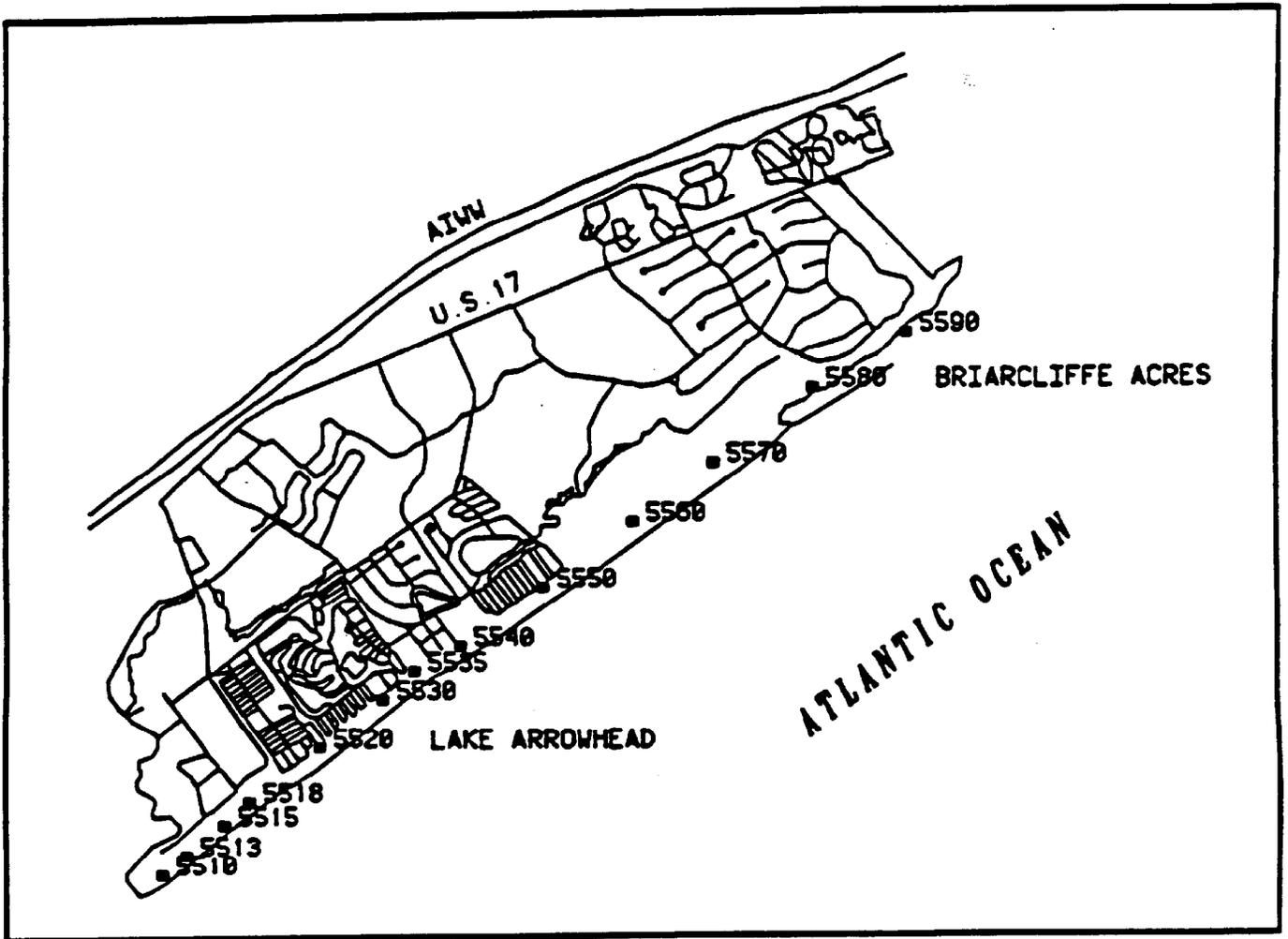
## ***Myrtle Beach***

The next area is the eight-mile section of shoreline within the Myrtle Beach city limits. The long-term erosion rate here is about one-half ft per year. Myrtle Beach was renourished between May and December 1997 as part of the US Army Corps of Engineers Grand Strand Renourishment Project; this fill reached equilibrium within a few years, and has since stabilized. The most recent beach surveys were conducted at 23 monuments in February and October 2003.

Stations 5300-5430, from 29<sup>th</sup> Ave. South to 31<sup>st</sup> Ave. North, are located in the southern commercial district. There are many seawalls and bulkheads in this region, and before renourishment sand volumes were relatively low. The 1997 renourishment project stabilized by 2000 and the upper beach berm has lost only a minor amount of sand since then. During the latest survey period the upper beach berm was once again stable but most stations did experience some erosion on the lower portion of the beach profile, typically below the 0 ft mean sea level contour or even in some cases below the -5 ft contour. In general the dry-sand berm width here is still adequate and continues to provide storm damage protection and a recreational benefit.

The area between stations 5435 and 5465, from 31<sup>st</sup> Ave. North to 67<sup>th</sup> Ave. North, is primarily a residential section with some commercial sites. There are few bulkheads or seawalls, and although a primary dune exists in many areas there are also unarmored sections where the highland, usually a residential lawn, simply slopes down to the berm. Most stations here were quite stable during the most recent survey period, which is usual for this area. Many stations gained a small amount of sand on the lower berm at elevation +5 ft, typically the limit of the high-tide wave uprush.

Stations 5470 - 5480 are located in the northern commercial district, although there are several residential structures here as well. A small but well-defined primary dune exists along most of the beach. Like the previous section all stations here experienced accretion at the +5 ft contour but were stable elsewhere. This berm accretion was most evident at station 5480, at 82<sup>nd</sup> Ave. North, where the berm extended seaward by about 50 ft.



Unincorporated Horry County--North

### ***Unincorporated Horry County—North***

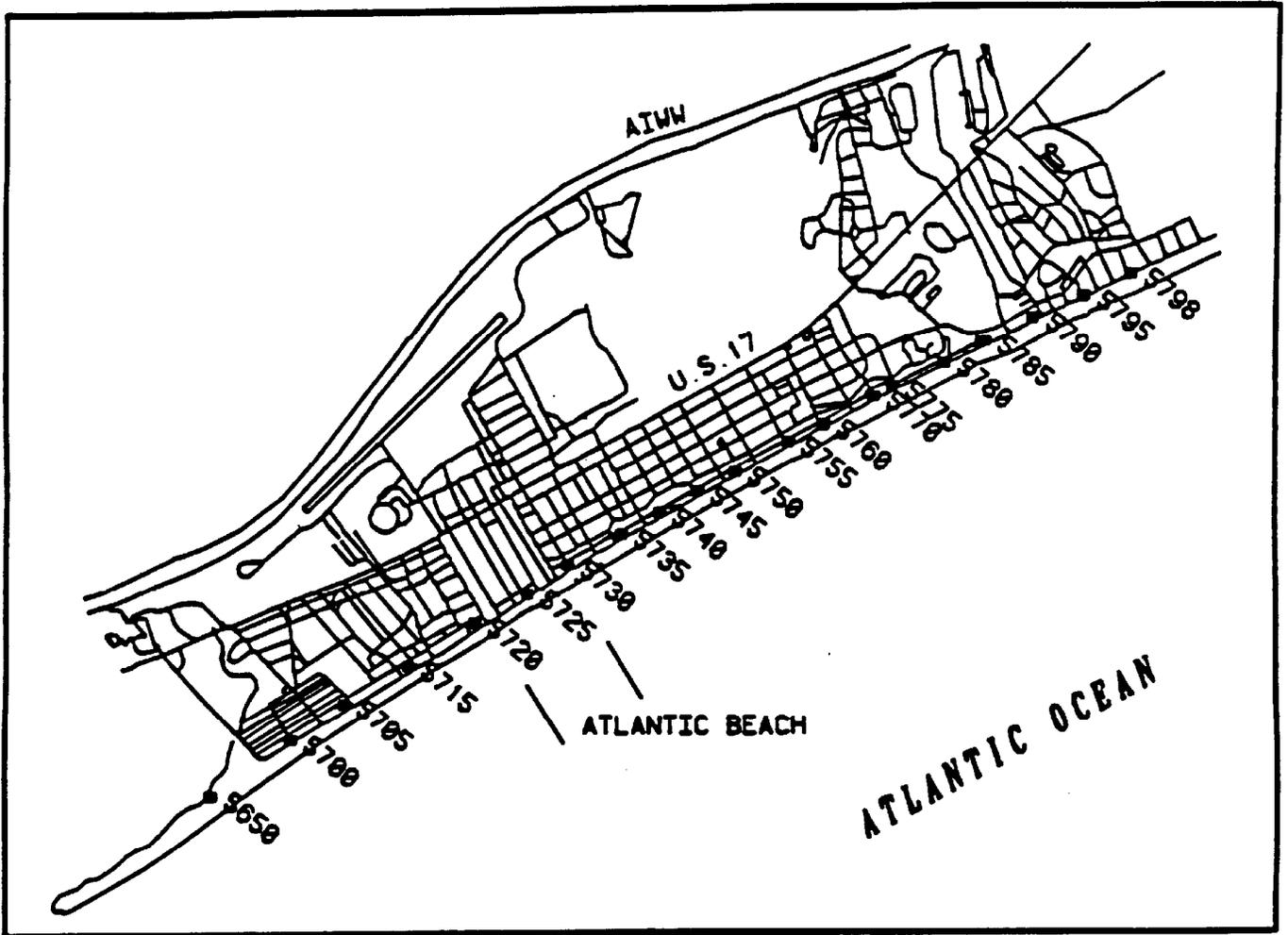
This area of unincorporated Horry County is located between the City of Myrtle Beach and White Point Swash, and includes the Shore Drive section, the campground section, and Briarcliffe Acres. The long-term erosion rate is about one-half ft per year. There are 14 beach survey monuments located here, which were most recently surveyed in December 2002 and November 2003.

Stations 5500 and 5505 are located on Club Road, just north of the City of Myrtle Beach and south of Singleton Swash, where there is little oceanfront development. The beach here has a well-developed primary dune and the shoreline is usually quite stable from year to year. During 2003 the upper beach berm gained a small amount of sand.

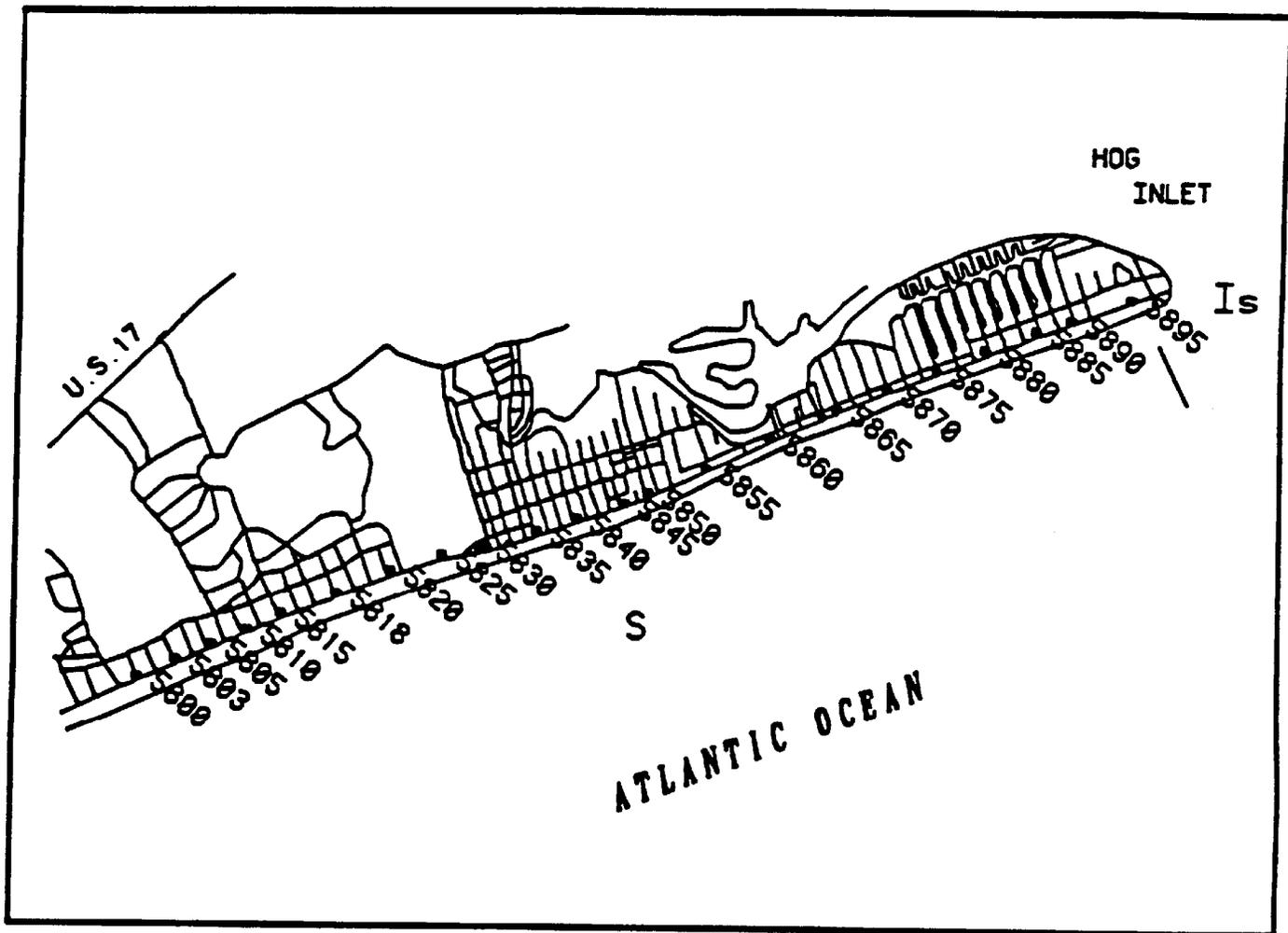
Stations 5510 to 5518 are located north of Singleton Swash along Shore Drive, where shoreline armoring is extensive and a dry-sand beach has generally been absent. This area was renourished by Horry County in 1999, when a 150-ft wide dry sand berm was created. The beach profile here experienced some post-project adjustment through 2002 as the renourishment berm eroded back by 30 to 50 ft, and then continued to erode during 2003 as the upper beach berm moved landward by another 10-20 ft.

Stations 5520-5550 are located in the campground section, where oceanfront development is a mixture of campsites and resort hotels. Although this section was not renourished in 1999 it did receive some indirect benefits from the nearby Shore Drive renourishment project. Most stations here showed only minor changes to the profile seaward of the dune during 2003, usually a small amount of accretion on the upper beach.

Stations 5560-5590 are located in Briarcliffe Acres, where the oceanfront is undeveloped and a well-defined primary dune exists with virtually no shoreline armoring. This area is usually quite stable. All stations here showed minor levels of accretion on the upper and intertidal beach during 2003.



North Myrtle Beach--Southern Half



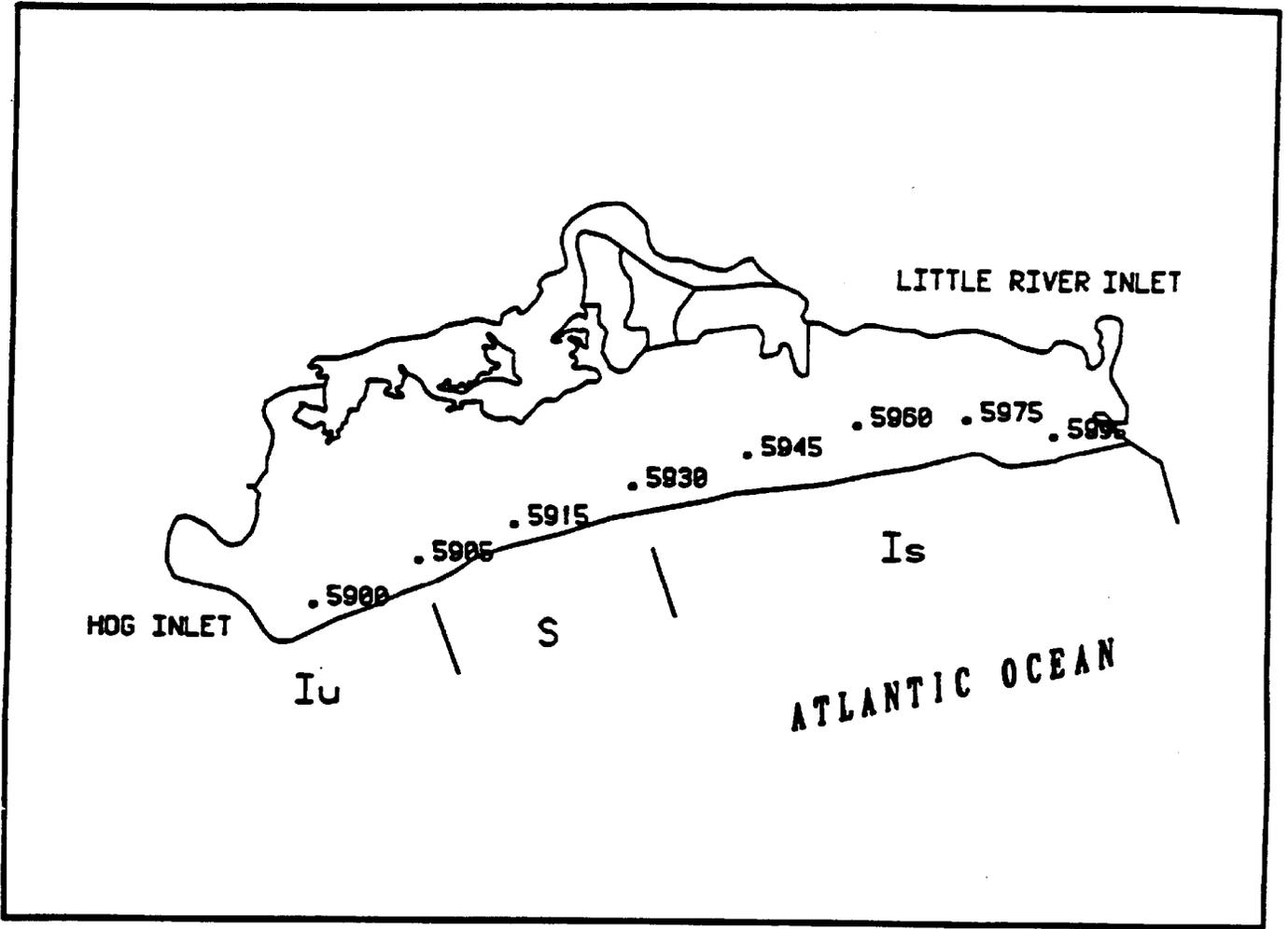
North Myrtle Beach--Northern Half

## ***North Myrtle Beach***

This section includes the City of North Myrtle Beach and Atlantic Beach, from White Point Swash to Hog Inlet. The shoreline is heavily developed and much of it is armored, with alternating zones of commercial and residential structures. The beach at North Myrtle Beach is typically very wide and flat, primarily due to the sand size, which is finer-grained than other Grand Strand beaches. The long-term erosion rate is about a half-foot per year. North Myrtle Beach was renourished by the US Army Corps of Engineers between September 1996 and April 1997, increasing the dry-sand beach width by over 100 ft and unit-width sand volumes by over 70 cubic yards per ft. The renourishment project has since stabilized, and some of the sand still remains on the upper beach. There are 43 beach survey monuments here, which were surveyed between March and June 2003 and also in March 2004.

Most of North Myrtle Beach remained quite stable between during 2003 and 2004. This includes the Windy Hill section, the southernmost portion of North Myrtle Beach from 48<sup>th</sup> Ave. South to 34<sup>th</sup> Ave. South where stations 5650-5720 are located, the Crescent Beach section, from 28<sup>th</sup> Ave. South to 2<sup>nd</sup> Ave. North where monitoring stations 5730 through 5798 are located, and the Ocean Drive section, from 2<sup>nd</sup> Ave. North to Sea Mountain Highway where stations 5800 to 5830 are located.

In the Cherry Grove section between station 5835 at Sea Mountain Highway and 5850 at 32<sup>nd</sup> Ave. North the character of the beach changes. Much of this area is armored and experienced chronic sand deficits prior to renourishment. This same 7-block area south of the Cherry Grove pier has also experienced higher erosion rates following the renourishment project, and the beach here is currently not as wide as the beach north of the pier or south of 28<sup>th</sup> Ave. North. Between June 2003 and March 2004 the upper-beach berm in this area eroded back by 25 to 45 ft. North of the pier, from station 5855 at 37<sup>th</sup> Ave. North to 5890 at 58<sup>th</sup> Ave. North, the beach showed only minor changes during 2004. Station 5895 on Hog Inlet was also stable but there is virtually no berm or high-tide beach here. In general, with the exception of the area immediately south of the pier the 1997 North Myrtle Beach renourishment project continues to hold up quite well.



Waites Island

## ***Waites Island***

Waites Island is an undeveloped three-mile long barrier island located between Hog Inlet to the southwest and Little River Inlet to the northeast. Little River Inlet was stabilized by the construction of a jetty system between 1981 and 1983. The southwest end of Waites Island is an unstabilized inlet zone, the central portion is a standard zone, and the northeastern section is a stabilized inlet zone. Most of the island has a long-term erosion rate ranging from -4 to -10 ft per year, although jetty construction has helped to stabilize the shoreline and lessen the erosion. During most of the 1990's the Hog Inlet shoreline was extremely erosional, losing several hundred feet, but has changed to an accretional mode in recent years. There are 6 monitoring stations on Waites Island, which were most recently surveyed in June 2002, June 2003, and May 2004.

During the past 2 years almost all profiles at Waites Island were stable or show signs of moderate accretion on the upper beach. Stations 5915 and 5945 are the two accretional stations, gaining sand on the seaward side of the primary dune as the upper beach profile seaward of the dune line became wider. Station 5905, closest to Hog Inlet at the south end of the island, had showed some signs of erosion in earlier years and was slightly erosional between 2002 and 2003, but was accretional between 2003 and 2004.

In general, it appears the accretional phase that began on much of the island several years ago is continuing. This may be due to the long-term stabilizing influence of the Little River jetties, which may eventually decrease the officially adopted long-term erosion rates on Waites Island.

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